

ProMix[®] 2KE

3A0870T

Plural Component Proportioner

EN

Self-contained, electronic plural component paint proportioner. For professional use only.



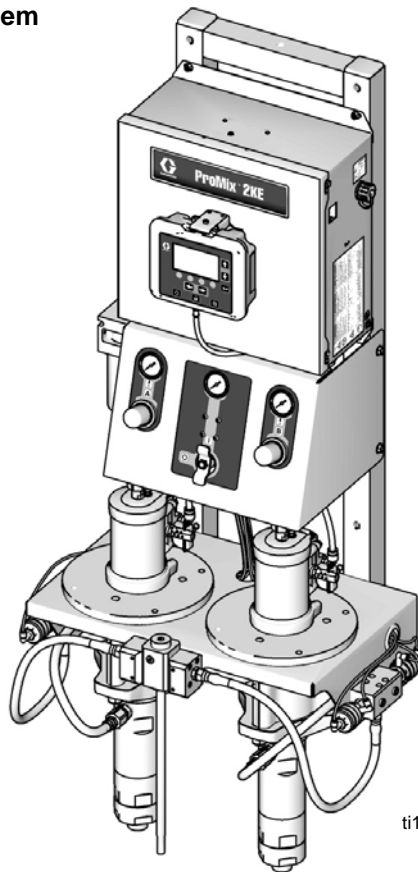
Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.

See pages 4 and 5 for model information, including maximum working pressure and approvals.

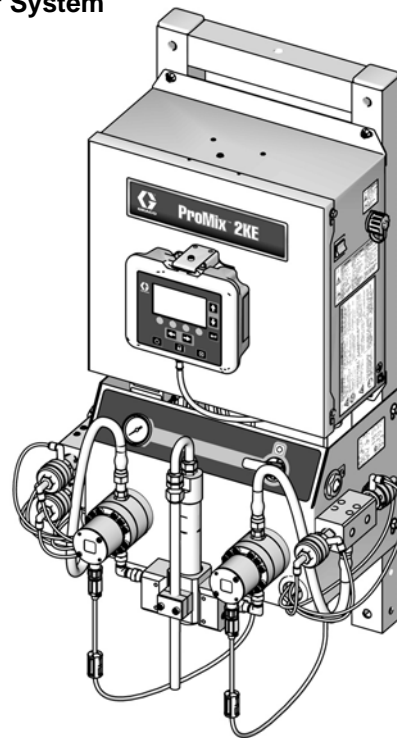
For patent information, see www.graco.com/patents

Pump System



ti15696a

Meter System



ti15698a





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Related Manuals

| Manual | Description |
|--------|--|
| 3A0868 | ProMix 2KE, Pump-Based, Operation |
| 3A0869 | ProMix 2KE, Meter-Based, Operation |
| 313599 | Coriolis Meter |
| 308778 | G3000 Flow Meter |
| 312781 | Fluid Mix Manifold |
| 312782 | Dosing Valve |
| 312784 | Gun Flush Box Kit 15V826 |
| 312792 | Merkur Displacement Pump |
| 312793 | Merkur Bellows Displacement Pump |
| 312796 | NXT Air Motor |
| 406714 | Rebuild Kit for High Pressure Dispense Valve |
| 406823 | Dispense Valve Seat Kits |
| 3A1244 | Graco Control Architecture Module Programming |
| 3A1323 | 16G353 Alternator Conversion Kit |
| 3A1324 | 16G351 Electric Power Conversion Kit |
| 3A1325 | ProMix 2KE Stand Kits |
| 3A1332 | 24H255 3-Color Valve Stack Kit |
| 3A1333 | 24H253 USB Module Kit |
| 313542 | Beacon Tower |

Non-Hazardous Location Models

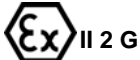


| Approved for Non-Hazardous Location | | | | | |
|-------------------------------------|--------|--|--|---------------|--|
| Part No. | Series | Description | Maximum Working Pressure psi (MPa, bar) | USB Module | Approvals* |
| Pump Systems | | | | |   |
| 24F088 | A | 3:1, Merkur, A and B | 300 (2.1, 21) | | |
| 24F089 | A | 23:1, Merkur, A and B | 2300 (15.8, 158) | | |
| 24F090 | A | 30:1, Merkur, A and B | 3000 (20.7, 207) | | |
| 24F091 | A | 45:1, Merkur, A and B | 4500 (31.0, 310) | | |
| 24F092 | A | 3:1, Merkur A, Merkur Bellows B | 300 (2.1, 21) | | |
| 24F093 | A | 23:1, Merkur A, Merkur Bellows B | 2300 (15.8, 158) | | |
| 24F094 | A | 35:1, Merkur A, Merkur Bellows B | 3500 (24.1, 241) | | |
| 24F095 | A | 3:1, Merkur, A and B | 300 (2.1, 21) | ✓ | |
| 24F096 | A | 23:1, Merkur, A and B | 2300 (15.8, 158) | ✓ | |
| 24F097 | A | 30:1, Merkur, A and B | 3000 (20.7, 207) | ✓ | |
| 24F098 | A | 45:1, Merkur, A and B | 4500 (31.0, 310) | ✓ | |
| 24F099 | A | 3:1, Merkur A, Merkur Bellows B | 300 (2.1, 21) | ✓ | |
| 24F100 | A | 23:1, Merkur A, Merkur Bellows B | 2300 (15.8, 158) | ✓ | |
| 24F101 | A | 35:1, Merkur A, Merkur Bellows B | 3500 (24.1, 241) | ✓ | |
| 24Z017 | A | 23:1, Merkur A, Merkur Bellows B | 2300 (15.8, 158) | ✓ | |
| Meter Systems | | | | | |
| 24F080 | A | G3000, 1 color/1 catalyst | 3000 (20.68, 206.8) | | |
| 24F081 | A | G3000, 3 colors/1 catalyst | 3000 (20.68, 206.8) | | |
| 24F082 | A | G3000, 1 color/1 catalyst | 3000 (20.68, 206.8) | ✓ | |
| 24F083 | A | G3000, 3 colors/1 catalyst | 3000 (20.68, 206.8) | ✓ | |
| 24Z015 | A | G3000 (A), G3000A (B), 1 color/1 catalyst | 3000 (20.68, 206.8) | ✓ | |
| 24Z016 | A | G3000 (A), G3000A (B), 3 color/1 catalyst | 3000 (20.68, 206.8) | ✓ | |

* ProMix 2KE non-hazardous location equipment manufactured in the United States, with serial number beginning with A or 01, has FM and CE approvals. Equipment manufactured in Belgium, with serial number beginning with M or 38, has CE approval.

Hazardous Location Models




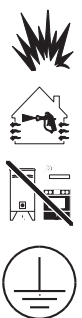


ProMix 2KE systems are not approved for use in hazardous locations unless the base model, all accessories, all kits, and all wiring meet local, state, and national codes.

| Approved for Hazardous Location Class 1, Div 1, Group D (North America); Class 1, Zones 1 and 2 (Europe) | | | | | | |
|---|--------|--|--|------------|--|--|
| Part No. | Series | Description | Maximum Working Pressure psi (MPa, bar) | USB Module | Approvals* | |
| Pump Systems | | | | | | |
| 24F102 | A | 3:1, Merkur, A and B | 300 (2.1, 21) | |  Ex ia px IIA T3 Ta = 0°C to 54°C FM10 ATEX 0025 X  APPROVED Intrinsically safe and purged equipment for Class I, Division 1, Group D, T3 Ta = 0°C to 54°C  2575 See Special Conditions for Safe Use in Warnings , page 6. | |
| 24F103 | A | 23:1, Merkur, A and B | 2300 (15.8, 158) | | | |
| 24F104 | A | 30:1, Merkur, A and B | 3000 (20.7, 207) | | | |
| 24F105 | A | 45:1, Merkur, A and B | 4500 (31.0, 310) | | | |
| 24F106 | A | 3:1, Merkur A, Merkur Bellows B | 300 (2.1, 21) | | | |
| 24F107 | A | 23:1, Merkur A, Merkur Bellows B | 2300 (15.8, 158) | | | |
| 24F108 | A | 35:1, Merkur A, Merkur Bellows B | 3500 (24.1, 241) | | | |
| 24F109 | A | 3:1, Merkur, A and B | 300 (2.1, 21) | ✓ | | |
| 24F110 | A | 23:1, Merkur, A and B | 2300 (15.8, 158) | ✓ | | |
| 24F111 | A | 30:1, Merkur, A and B | 3000 (20.7, 207) | ✓ | | |
| 24F112 | A | 45:1, Merkur, A and B | 4500 (31.0, 310) | ✓ | | |
| 24F113 | A | 3:1, Merkur A, Merkur Bellows B | 300 (2.1, 21) | ✓ | | |
| 24F114 | A | 23:1, Merkur A, Merkur Bellows B | 2300 (15.8, 158) | ✓ | | |
| 24F115 | A | 35:1, Merkur A, Merkur Bellows B | 3500 (24.1, 241) | ✓ | | |
| 24Z018 | A | 23:1, Merkur A, Merkur Bellows B | 2300 (15.8, 158) | ✓ | | |
| Meter Systems | | | | | | |
| 24F084 | A | G3000, 1 color/1 catalyst | 3000 (20.68, 206.8) | | | |
| 24F085 | A | G3000, 3 colors/1 catalyst | 3000 (20.68, 206.8) | | | |
| 24F086 | A | G3000, 1 color/1 catalyst | 3000 (20.68, 206.8) | ✓ | | |
| 24F087 | A | G3000, 3 colors/1 catalyst | 3000 (20.68, 206.8) | ✓ | | |
| 24Z013 | A | G3000 (A), G3000A (B), 1 color/1 catalyst | 3000 (20.68, 206.8) | ✓ | | |
| 24Z014 | A | G3000 (A), G3000A (B), 3 color/1 catalyst | 3000 (20.68, 206.8) | ✓ | | |



* ProMix 2KE hazardous location equipment manufactured in the United States, with serial number beginning with A or 01, has ATEX, FM, and CE approvals, as noted. Equipment manufactured in Belgium, with serial number beginning with M or 38, has ATEX and CE approvals, as noted.

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

|  WARNING | |
|--|---|
|  | <p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Ground all equipment in the work area. See Grounding instructions. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area. |
|  | <p>SPECIAL CONDITIONS FOR SAFE USE</p> <ul style="list-style-type: none"> • To prevent the risk of electrostatic sparking, the equipment's non-metallic parts should be cleaned only with a damp cloth. • Pump Systems: The aluminum adapter plate may spark upon impact or contact with moving parts, which may cause fire or explosion. Take precautions to avoid such impact or contact. |
|  | <p>ELECTRIC SHOCK HAZARD</p> <p>This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> • Turn off and disconnect power at main switch before disconnecting any cables and before servicing equipment. • Connect only to grounded power source. • All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations. |

⚠ WARNING

| | |
|---|--|
|  | <p>INTRINSIC SAFETY</p> <p>Intrinsically safe equipment that is installed improperly or connected to non-intrinsically safe equipment will create a hazardous condition and can cause fire, explosion, or electric shock. Follow local regulations and the following safety requirements.</p> <ul style="list-style-type: none"> • Only models with model numbers 24Z013, 24Z014, 24F084-24F087, 24F102-24F115, and 24Z018, utilizing the air-driven alternator, are approved for installation in a Hazardous (explosive atmosphere) Location. See Hazardous Location Models, page 5. • Be sure your installation complies with national, state, and local codes for the installation of electrical apparatus in a Class I, Group D, Division 1 (North America) or Class I, Zones 1 and 2 (Europe) Hazardous Location, including all of the local safety fire codes, NFPA 33, NEC 500 and 516, and OSHA 1910.107. • To help prevent fire and explosion: <ul style="list-style-type: none"> • Do not install equipment approved only for a non-hazardous location in a hazardous location. See model ID label for the intrinsic safety rating of your model. • Do not substitute system components as this may impair intrinsic safety. • Equipment that comes in contact with the intrinsically safe terminals must be rated for Intrinsic Safety. This includes DC voltage meters, ohmmeters, cables, and connections. Remove the unit from the hazardous area when troubleshooting. • The equipment is intrinsically safe when no external electrical components are connected to it. • Do not connect, download, or remove USB device unless unit is removed from the hazardous (explosive atmosphere) location. |
|  | <p>SKIN INJECTION HAZARD</p> <p>High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not spray without tip guard and trigger guard installed. • Engage trigger lock when not spraying. • Do not point gun at anyone or at any part of the body. • Do not put your hand over the spray tip. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses and couplings daily. Replace worn or damaged parts immediately. |



WARNING



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.



MOVING PARTS HAZARD

Moving parts can pinch, cut or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.



TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled or swallowed.

- Read Safety Data Sheet (SDS) for handling instructions and to know the specific hazards of the fluids you are using, including the effects of long-term exposure.
- When spraying, servicing equipment, or when in the work area, always keep work area well ventilated and always wear appropriate personal protective equipment. See **Personal Protective Equipment** warnings in this manual.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.



PERSONAL PROTECTIVE EQUIPMENT

Always wear appropriate personal protective equipment and cover all skin when spraying, servicing equipment, or when in the work area. Protective equipment helps prevent serious injury, including long-term exposure; inhalation of toxic fumes, mists or vapors; allergic reaction; burns; eye injury and hearing loss. This protective equipment includes but is not limited to:

- A properly fitting respirator, which may include a supplied-air respirator, chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority.
- Protective eyewear and hearing protection.

Important Two-Component Material Information

Isocyanates (ISO) are catalysts used in two component materials.

Isocyanate Conditions



Spraying or dispensing materials that contain isocyanates creates potentially harmful mists, vapors, and atomized particulates.

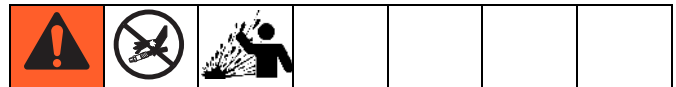
- Read and understand the fluid manufacturer's warnings and Safety Data Sheet (SDS) to know specific hazards and precautions related to isocyanates.
- Use of isocyanates involves potentially hazardous procedures. Do not spray with this equipment unless you are trained, qualified, and have read and understood the information in this manual and in the fluid manufacturer's application instructions and SDS.
- Use of incorrectly maintained or mis-adjusted equipment may result in improperly cured material. Equipment must be carefully maintained and adjusted according to instructions in the manual.
- To prevent inhalation of isocyanate mists, vapors, and atomized particulates, everyone in the work area must wear appropriate respiratory protection. Always wear a properly fitting respirator, which may include a supplied-air respirator. Ventilate the work area according to instructions in the fluid manufacturer's SDS.
- Avoid all skin contact with isocyanates. Everyone in the work area must wear chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority. Follow all fluid manufacturer recommendations, including those regarding handling of contaminated clothing. After spraying, wash hands and face before eating or drinking.

Material Self-ignition



Some materials may become self-igniting if applied too thick. Read material manufacturer's warnings and Safety Data Sheet (SDS).

Keep Components A and B Separate



Cross-contamination can result in cured material in fluid lines which could cause serious injury or damage equipment. To prevent cross-contamination:

- **Never** interchange component A and component B wetted parts.
- Never use solvent on one side if it has been contaminated from the other side.

Moisture Sensitivity of Isocyanates

Exposure to moisture (such as humidity) will cause ISO to partially cure; forming small, hard, abrasive crystals, which become suspended in the fluid. Eventually a film will form on the surface and the ISO will begin to gel, increasing in viscosity.

NOTICE

Partially cured ISO will reduce performance and the life of all wetted parts.

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. **Never** store ISO in an open container.
- Keep the ISO pump wet cup or reservoir (if installed) filled with appropriate lubricant. The lubricant creates a barrier between the ISO and the atmosphere.
- Use only moisture-proof hoses compatible with ISO.
- Never use reclaimed solvents, which may contain moisture. Always keep solvent containers closed when not in use.
- Always lubricate threaded parts with an appropriate lubricant when reassembling.

NOTE: The amount of film formation and rate of crystallization varies depending on the blend of ISO, the humidity, and the temperature.

Changing Materials

NOTICE

Changing the material types used in your equipment requires special attention to avoid equipment damage and downtime.

- When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.
- Always clean the fluid inlet strainers after flushing.
- Check with your material manufacturer for chemical compatibility.
- When changing between epoxies and urethanes or polyureas, disassemble and clean all fluid components and change hoses. Epoxies often have amines on the B (hardener) side. Polyureas often have aminies on the A (resin) side.

Important Acid Catalyst Information

The 2KE Plural Component Proportioner is designed for acid catalysts (“acid”) currently used in two-component, wood-finishing materials. Current acids in use (with pH levels as low as 1) are more corrosive than earlier acids. More corrosion-resistant wetted materials of construction are required, and must be used without substitution, to withstand the increased corrosive properties of these acids.

Acid Catalyst Conditions



Acid is flammable, and spraying or dispensing acid creates potentially harmful mists, vapors, and atomized particulates. To help prevent fire and explosion and serious injury:

- Read and understand the fluid manufacturer’s warnings and Safety Data Sheet (SDS) to know specific hazards and precautions related to the acid.
- Use only genuine, manufacturer’s recommended acid-compatible parts in the catalyst system (hoses, fittings, etc). A reaction may occur between any substituted parts and the acid.
- To prevent inhalation of acid mists, vapors, and atomized particulates, everyone in the work area must wear appropriate respiratory protection. Always wear a properly fitting respirator, which may include a supplied-air respirator. Ventilate the work area according to instructions in the acid manufacturer’s SDS.
- Avoid all skin contact with acid. Everyone in the work area must wear chemically impermeable gloves, protective clothing, foot coverings, aprons, and face shields as recommended by the acid manufacturer and local regulatory authority. Follow all fluid manufacturer recommendations, including those regarding handling of contaminated clothing. Wash hands and face before eating or drinking.
- Regularly inspect equipment for potential leaks and remove spills promptly and completely to avoid direct contact or inhalation of the acid and its vapors.
- Keep acid away from heat, sparks, and open flames. Do not smoke in the work area. Eliminate all ignition sources.
- Store acid in the original container in a cool, dry, and well-ventilated area away from direct sunlight and away from other chemicals in accordance with acid manufacturer’s recommendations. To avoid corrosion of containers, do not store acid in substitute containers. Reseal the original container to prevent vapors from contaminating the storage space and surrounding facility.

Moisture Sensitivity of Acid Catalysts

Acid catalysts can be sensitive to atmospheric moisture and other contaminants. It is recommended the catalyst pump and valve seal areas exposed to atmosphere are flooded with ISO oil, TSL, or other compatible material to prevent acid build-up and premature seal damage and failure.

NOTICE

Acid build-up will damage the valve seals and reduce the performance and life of the catalyst pump. To prevent exposing acid to moisture:

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. Never store acids in an open container.
- Keep the catalyst pump and the valve seals filled with the appropriate lubricant. The lubricant creates a barrier between the acid and the atmosphere.
- Use only moisture-proof hoses compatible with acids.
- Always lubricate threaded parts with an appropriate lubricant when reassembling.



Pressure Relief Procedure





To reduce the risk of skin injection, relieve pressure when you stop spraying, before changing spray tips, and before cleaning, checking, or servicing equipment.

NOTE: The following procedure relieves all fluid and air pressure in the ProMix 2KE system.

Pump Systems

1. Press  on Run Mix Spray (Screen 2) or  from any screen to put the system in Standby.
2. Follow procedure for **Purging Fluid Supply System**, page 13, if desired or necessary.
3. Shut off air supply to A and B pumps and solvent supply pumps.
4. With the gun triggered, push the manual override on the A and B dose and solvent valve solenoids to relieve pressure. See FIG. 1, page 15. Verify that fluid pressure is reduced to 0.
5. Reinstall the Control Box cover.

Meter Systems

1. Press  on Run Mix Spray (Screen 2) or  from any screen to put the system in Standby.
2. Shut off the A1 (A2 and A3, if using multiple colors) and B fluid supply pumps/pressure pots.
3. Remove the Control Box cover.
4. With the gun triggered, push the manual override on the A1 (A2, A3), and B dose valve solenoids to relieve pressure. See FIG. 1, page 15.
5. Follow **Purging** procedure, page 14.
6. Shut off the fluid supply to solvent valves A and B.
7. With the gun triggered, push the manual override on the A and B solvent valve solenoids to relieve solvent pressure. See FIG. 1. Verify that solvent pressure is reduced to 0.
8. Reinstall the Control Box cover.

Purging



Pump Systems

There are 2 pump purging procedures in this manual:




- **Purging Mixed Material**
- **Purging Fluid Supply System**

Use the criteria listed for each procedure to determine which procedure to use.

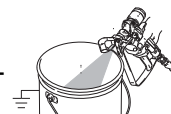
Purging Mixed Material

There are times when you only want to purge the fluid manifold, such as:

- end of potlife
- breaks in spraying that exceed the potlife
- overnight shutdown
- before servicing the fluid manifold assembly, hose or gun.

1. Press  on Run Mix Spray (Screen 2) or  from any screen to put the system in Standby.
2. Trigger the gun to relieve pressure.
3. If you are using a high pressure gun, engage the trigger lock. Remove spray tip and clean tip separately.
4. If using an electrostatic gun shut off the electrostatics before flushing the gun.
5. Set the solvent supply pressure regulator at a pressure high enough to completely purge the system in a reasonable amount of time but low enough to avoid splashing or an injection injury. Generally, a setting of 100 psi (0.7 MPa, 7 bar) is sufficient.
6. If using a gun flush box, place the gun into the box and close the lid. Press  on Run Mix Spray (Screen 2). The purge sequence automatically starts.

If the gun flush box is not used, trigger the gun into a grounded metal pail until the purge sequence is complete.



When done purging, the system automatically switches to Standby mode.

7. If the system is not completely clean, repeat step 6.

NOTE: If necessary, adjust purge sequence so only one cycle is required.



8. Trigger the gun to relieve pressure. Engage trigger lock.
9. If spray tip was removed, reinstall it.
10. Adjust the solvent supply regulator back to its normal operating pressure.

NOTE: If your system uses 2 guns, you must trigger both guns simultaneously during a purge to purge both guns and lines. Verify that clean solvent flows from each gun. If not, repeat purge or clear clog/blockage in system.

Purging Fluid Supply System

Follow this procedure before:

- the first time material is loaded into equipment
- servicing
- shutting down equipment for an extended period of time
- putting equipment into storage

1. Press  on Run Mix Spray (Screen 2) or  from any screen to put the system in Standby.
2. Trigger the gun to relieve pressure.
3. If you are using a high pressure gun, engage the trigger lock. Remove spray tip and clean tip separately.
4. If using an electrostatic gun, shut off the electrostatics before flushing the gun.

5. Disconnect the component A and B fluid supplies at the pump inlets, and connect solvent supply lines.
6. Adjust the solvent fluid supply pressure. Use the lowest possible pressure to avoid splashing.
7. Remove the Control Box cover to access the solenoid valves. See FIG. 1, page 15.
8. Purge as follows:
 - Purge component A side. See FIG. 1, page 15. Press the manual override on the Dose Valve A solenoid valve and trigger the gun into a grounded metal pail.

Purge component B side. Press the manual override on the Dose Valve B solenoid valve and trigger the gun into a grounded metal pail until clean solvent flows from the gun.

Repeat to thoroughly clean the mix manifold.
9. Reinstall the Control Box cover.
10. Shut off the solvent fluid supply.
11. Disconnect the solvent supply lines and reconnect the component A and B fluid supplies.





NOTE: If your system uses 2 guns, you must trigger both guns simultaneously during a purge to purge both guns and lines. Verify that clean solvent flows from each gun. If not, repeat purge or clear clog/blockage in system.

NOTE: The system remains full of solvent.

Meter Systems

Purge the system:

- at the end of potlife
- breaks in spraying that exceed the potlife
- overnight shutdown or end of shift
- the first time material is loaded into equipment
- servicing
- shutting down equipment for an extended period of time

1. Press  on Run Mix Spray (Screen 2) or  from any screen to put the system in Standby.
 2. Trigger the gun to relieve pressure.
 3. If you are using a high pressure gun, engage the trigger lock. Remove spray tip and clean tip separately.
 4. If using an electrostatic gun shut off the electrostatics before flushing the gun.
 5. Set the solvent supply pressure regulator at a pressure high enough to completely purge the system in a reasonable amount of time but low enough to avoid splashing or an injection injury. Generally, a setting of 100 psi (0.7 MPa, 7 bar) is sufficient.
 6. If using a gun flush box, place the gun into the box and close the lid.
 7. Press  on Run Mix Spray (Screen 2). The purge sequence automatically starts.
- If the gun flush box is not used, trigger the gun into a grounded metal pail until the system returns to Standby mode.
- 
8. If the system is not completely clean, repeat step 6.
 9. Trigger the gun to relieve pressure. Engage trigger lock.
 10. If spray tip was removed, reinstall it.
 11. Adjust the solvent supply regulator back to its normal operating pressure.

NOTE: The system remains full of solvent.

NOTE: If your system uses 2 guns, you must trigger both guns simultaneously during a purge to purge both guns and lines. Verify that clean solvent flows from each gun. If not, repeat purge or clear clog/blockage in system.

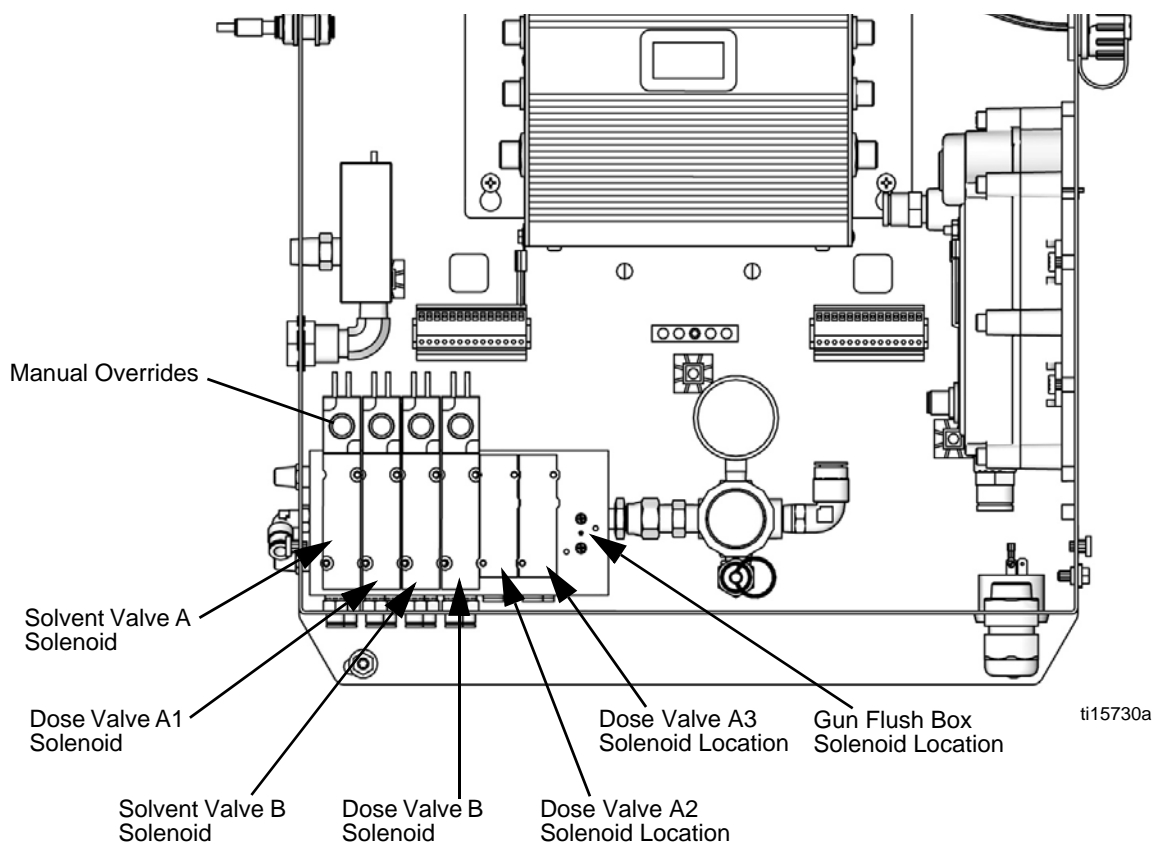


FIG. 1. Solenoid Valves in Control Box

Shutdown

1. Follow **Purging** procedure for your system, page 13 or 14.
2. Close main air shutoff valve on air supply line and on ProMix 2KE.
3. **Non-IS Systems:** Shut off ProMix 2KE power (0 position). **NOTE:** Meter-based systems will restart in Recipe 0.

Maintenance Recommendations

The following table shows starting maintenance recommendations. Maintenance needs will vary based on individual applications and material differences.

| Component | Recommended Maintenance Frequency |
|----------------|-----------------------------------|
| Solvent Valves | 1,000,000 cycles |
| Fluid Filter | daily |
| Air Filter | monthly |
| Pumps | 250,000 cycles |
| Dose Valves | 1,000,000 cycles |
| Meters | 5,000 gallons |

Service

Before Servicing

| | | | | | | |
|---|--|--|--|--|--|--|
| | | | | | | |
| <ul style="list-style-type: none"> To avoid electric shock, turn off power before servicing. Servicing the Control Box exposes you to high voltage. Shut off power at main circuit breaker before opening enclosure. All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations. Do not substitute system components as this may impair intrinsic safety. Read Warnings, pages 6- 9. | | | | | | |

1. Follow **Pressure Relief Procedure**, page 12, if service time may exceed pot life time, before servicing fluid components, and before transporting equipment to a service area.
2. Close air shutoff valves.
3. **Non-IS Systems:** Shut off power (0 position).
4. If servicing Control Box, also shut off power at main circuit breaker.

Replace the Air Filter Element

| | | | | | | |
|---|--|--|--|--|--|--|
| | | | | | | |
| <p>Removing a pressurized air filter bowl could cause serious injury. Depressurize air line before servicing.</p> | | | | | | |

Pump systems have two air filters: the 5 micron air manifold filter (209) and the 40 micron pump air filter (206). Meter systems have only the 5 micron filter (209). Check filters daily and replace element(s) as needed. Order 15D909 (5 micron) or 15D890 (40 micron).

1. Close main air shutoff valve on air supply line and on system. Depressurize air line.
2. Remove the filter cover (A).
3. Unscrew the filter bowl (B).

4. Remove and replace element (206a, 209a).
5. Screw filter bowl (B) on securely. Install cover (A).

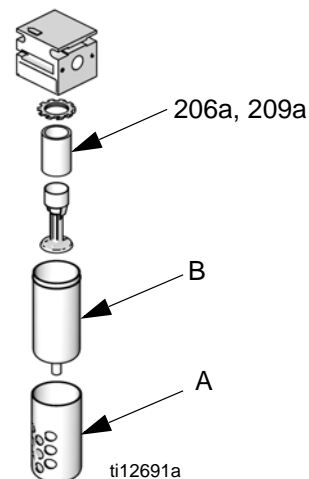
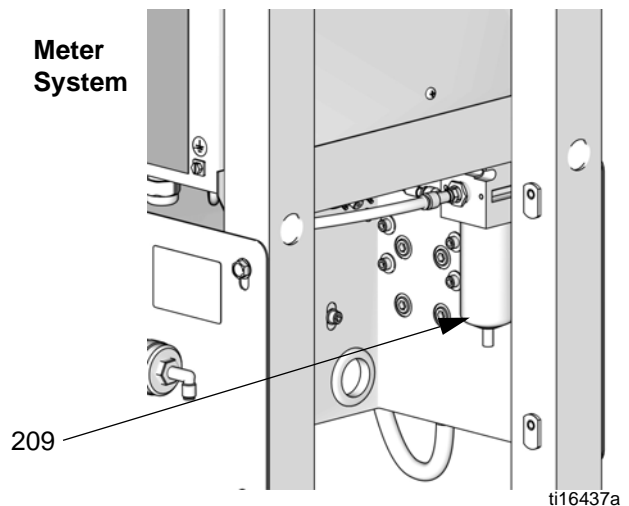
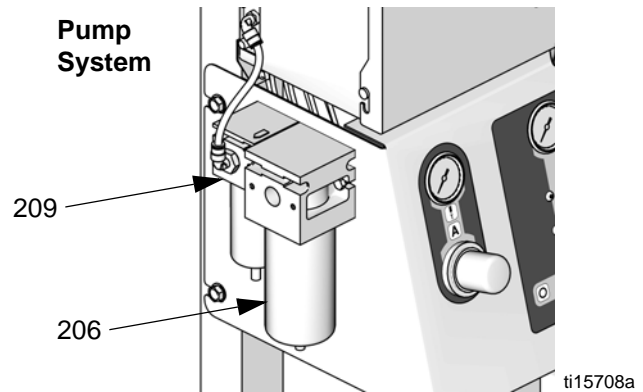


FIG. 2. Replace Air Filter Element(s)

Replace Solenoids

The system has a minimum of 4 solenoids. If you have a 3-color system or a gun flush box, you have additional (optional) solenoids for each.



To replace a single solenoid:

1. Follow **Before Servicing**, page 16. Disconnect main power.
2. Open Control Box.
3. Disconnect 2 solenoid wires (N) from harness (320). See FIG. 3.
4. Unscrew 2 screws (P) and remove solenoid (306).
5. Install new solenoid (306).
6. Connect 2 wires (N) to harness (320). Solenoid wires are polarized (red+, black-). Refer to System Electrical Schematics, pages 66-69.
7. Replace Control Box cover.

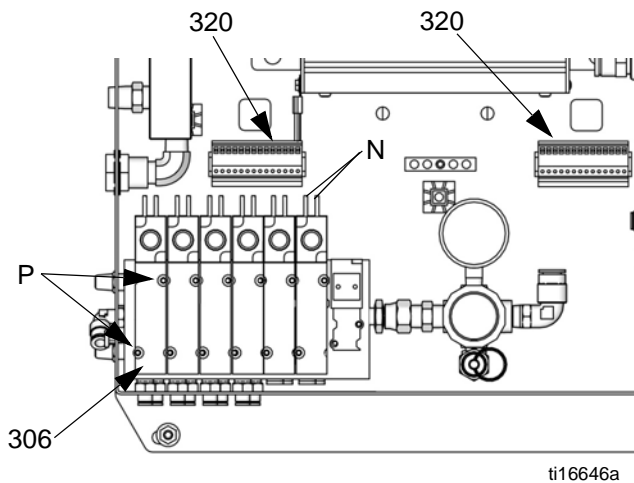


FIG. 3. Replace a Single Solenoid

To replace the solenoid module:

1. Follow **Before Servicing**, page 16. Disconnect main power.
2. Open Control Box.
3. Disconnect all solenoid wires (N) from harnesses (320).

NOTE: If you have an intrinsically safe model, you will need to remove the alternator air regulator from the solenoid module. See page 21 for removal instructions.

4. Remove two screws (305).
5. Remove and replace solenoid module.
6. Connect all wires (N) to harnesses (320). Solenoid wires are polarized (red+, black-). Refer to System Electrical Schematics, pages 66-69.
7. Replace Control Box cover.

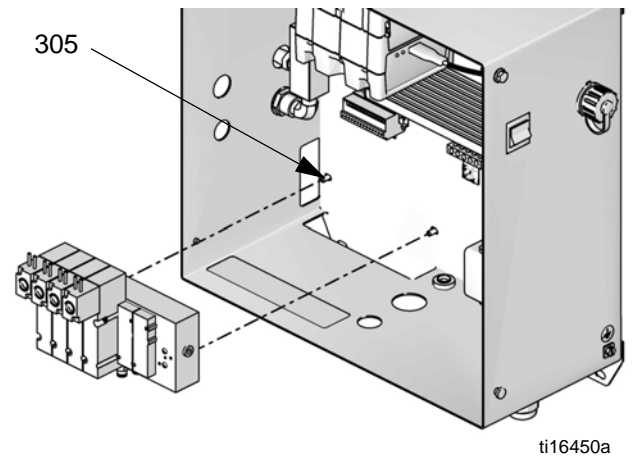





FIG. 4. Replace Solenoid Module

Replace the Power Supply

| | | | | | | |
|---|---|---|--|--|--|--|
|  |  |  | | | | |
| All electrical wiring must be completed by a qualified electrician and comply with all local codes and regulations. | | | | | | |

Wall Power Supply and Filter

1. Follow **Before Servicing**, page 16. Disconnect main power.
2. Open Control Box.
3. Disconnect the three input wires from the line filter (403).

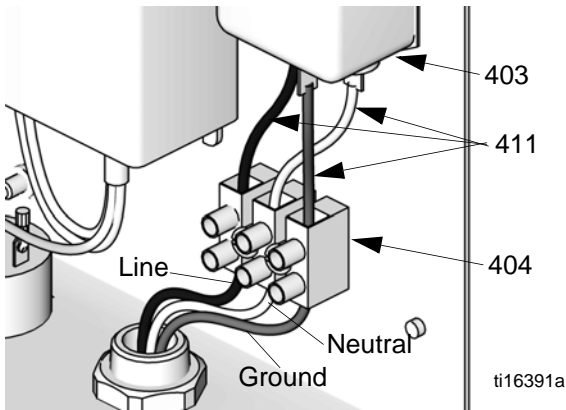


FIG. 5. Terminal Block Electrical Connections

4. See FIG. 8. Disconnect the power supply CAN cable (401a) from the advanced fluid control module (302).
5. Disconnect line filter wires and power supply wires from the power switch (402).
6. Disconnect the power supply ground wire, PS(GND), from the advanced fluid control module ground terminal (T).
7. Remove four screws (405) and remove power supply (401). If replacing filter, remove two screws (407) and the filter (403).
8. Install the new power supply (401) and line filter (403), using supplied screws (405, 407), as shown.
9. See FIG. 8. Connect wire harness (410/LF) to the line filter (403) and to the power switch (402), as shown. See also Electrical schematic.

10. Connect the power supply wire harness (411/PS) to the switch (402), as shown. See also Electrical Schematic. Connect the PS ground wire to the ground terminal (T) of the advanced fluid control module.
11. See FIG. 5. Connect wire harness (411) to the line filter (403) and terminal block (404) as shown. See also Electrical Schematic.
12. Connect CAN cable (401a) to the advanced fluid control module.

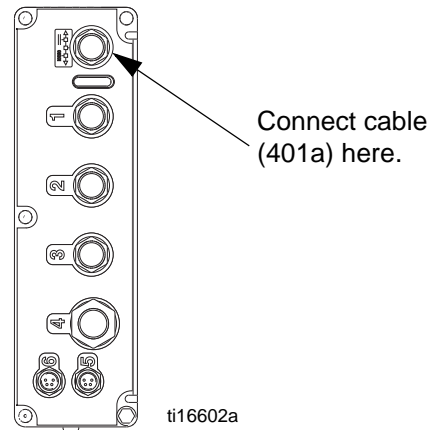


FIG. 6. Reconnect CAN cable.

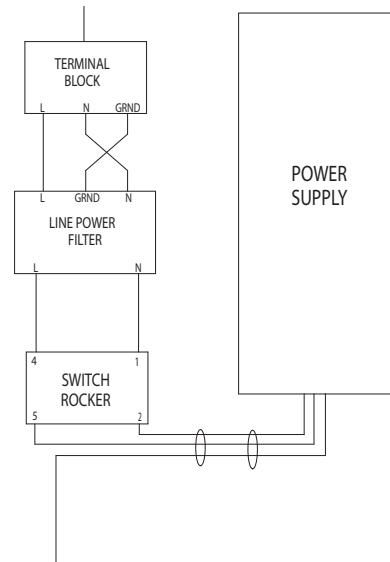


FIG. 7. Electrical Schematic

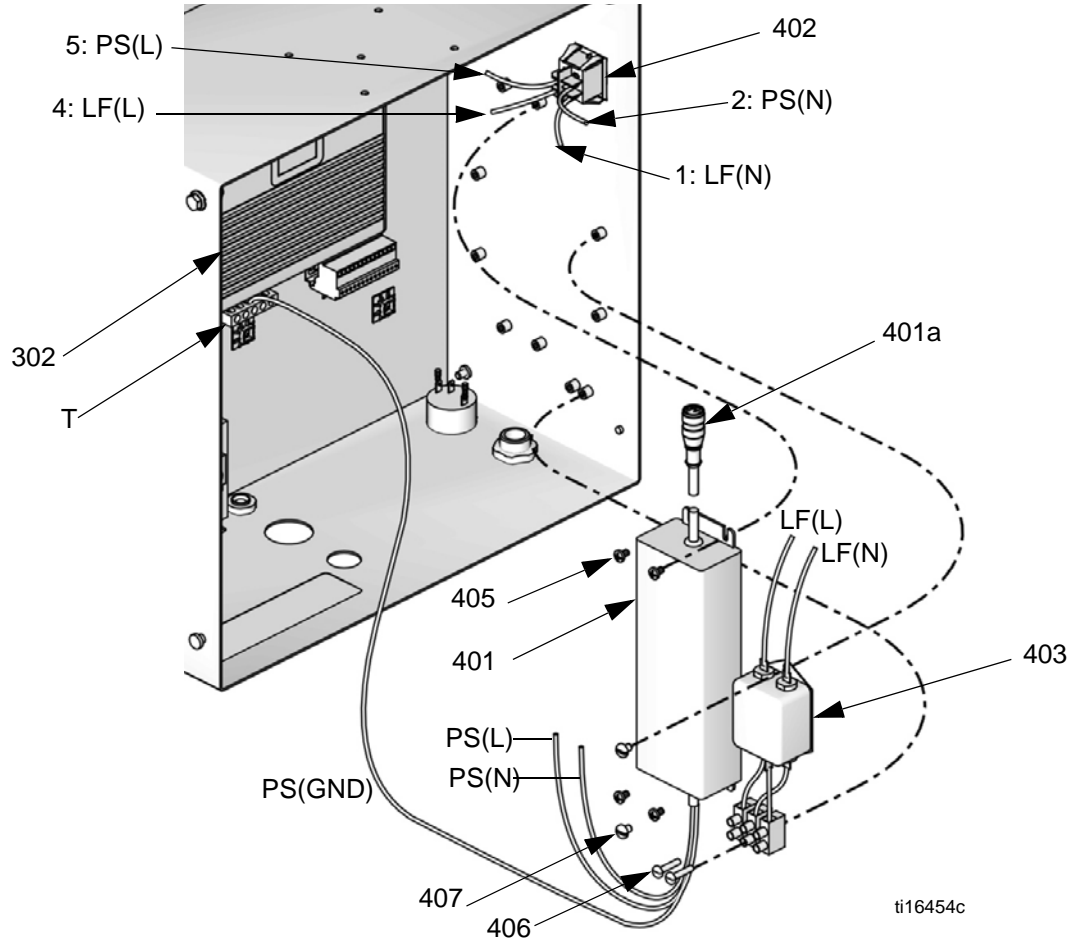


FIG. 8. Replace Wall Power Supply

Alternator Power Supply and Turbine

1. Follow **Before Servicing**, page 16. Disconnect main air.
2. Open Control Box.
3. See FIG. 9. Disconnect output power cable connections from alternator module (501). Disconnect ground lead (G) from control box ground terminal (T).
4. Disconnect the power supply cables from the Advanced Fluid Control Module, the USB Module, and the Display Module.
5. Disconnect air regulator line and exhaust air line from alternator module.
6. Remove four screws (509) from mounting to remove alternator from control box.
7. Remove seven screws (501h) to separate alternator housings.
8. Replace turbine (501d) if necessary. Lightly lubricate turbine o-ring to ease alternator housing reassembly.
9. Follow steps in reverse order to reassemble alternator regulator assembly and to reconnect power

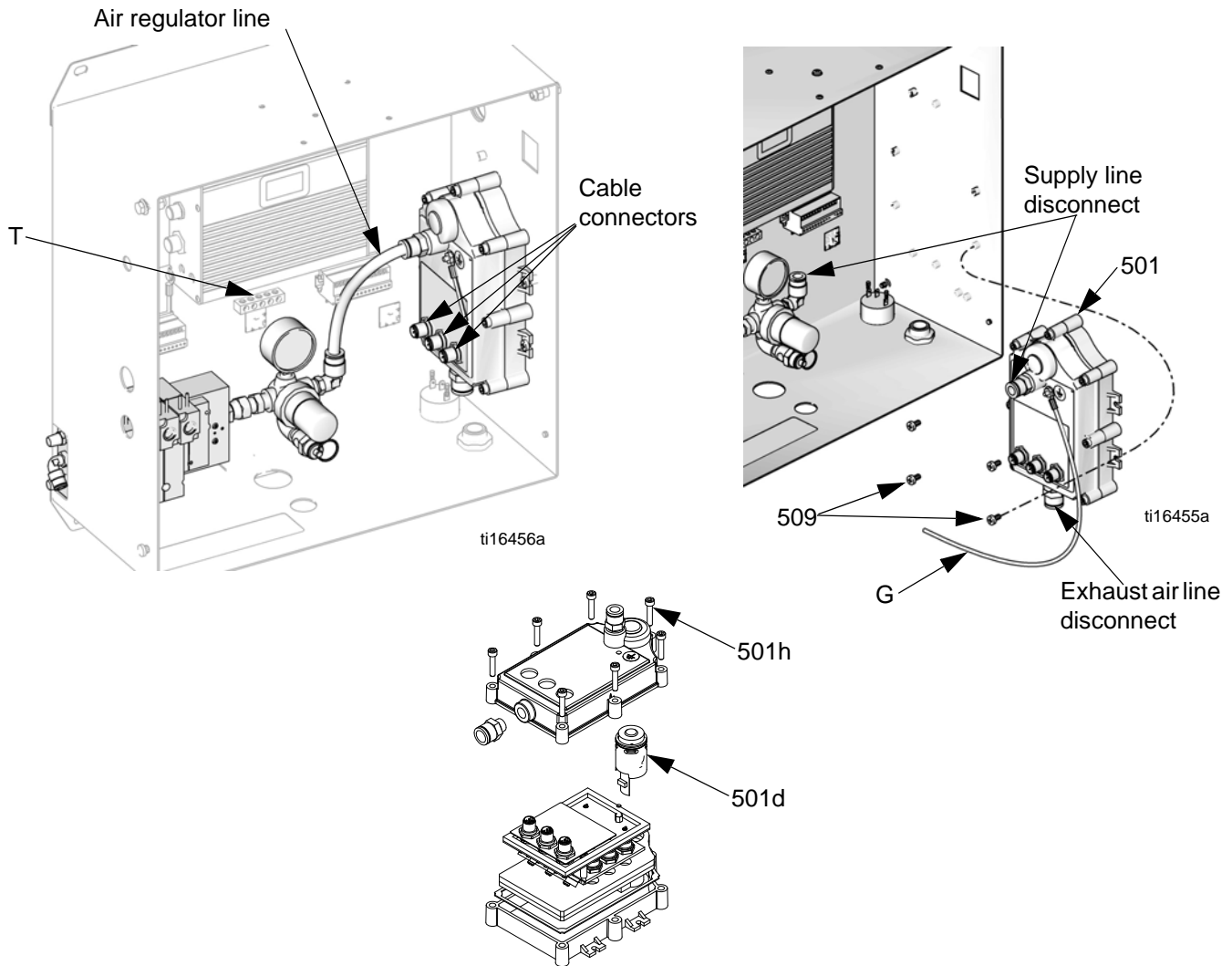


FIG. 9. Remove Alternator Module (and Turbine)

Replace Alternator Regulator

1. Follow **Before Servicing**, page 16. Disconnect main air.
2. Open Control Box.
3. Disconnect supply air line from regulator assembly (505).
4. Loosen air regulator swivel fittings (506) and remove from solenoid module.
5. Repair or replace alternator regulator parts as necessary. See **Alternator Power Assembly**, page 56, for repair parts. Replace air regulator swivel fitting (506).
6. Reconnect air line. Set regulator air pressure to 18 psi (0.12 MPa, 1.2 bar).

NOTICE

To avoid damage to the alternator, do not set the regulator air pressure higher than 18 psi (0.12 MPa, 1.2 bar).

7. Close Control Box and restore power.

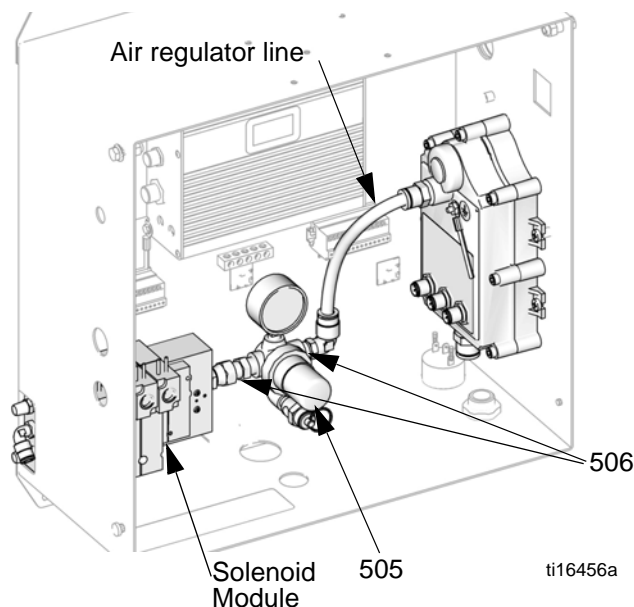
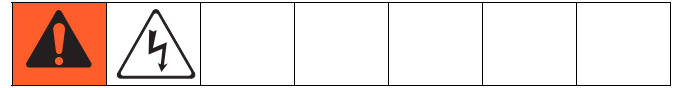


FIG. 10. Replace Alternator Regulator

Replace Advanced Fluid Control Module (AFCM)



1. Follow **Before Servicing**, page 16. Disconnect main power.
2. Open Control Box.
3. Remove all cables from AFCM (302). Take note of cable locations.
4. Disconnect ground wire from ground screw (GS).
5. Loosen four mounting screws (303).
6. Slide AFCM up and out of keyhole slots.
7. Follow steps in reverse order to install a new AFCM. See electrical schematic for cable connection information.
8. Follow instructions in Manual 3A1244 to update the software on the new AFCM.
9. Close Control Box and restore power.

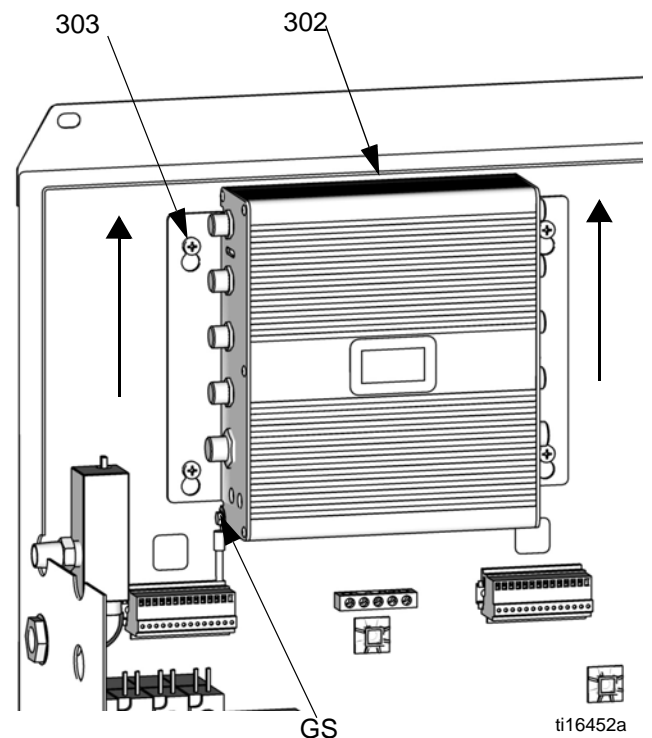
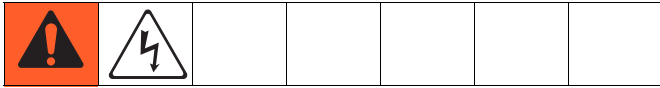


FIG. 11. Replace AFCM

Replace Alarm



1. Follow **Before Servicing**, page 16. Disconnect main power.
2. Open Control Box.
3. Disconnect alarm wires from alarm (311).
4. Unscrew alarm jam/mounting nut to remove alarm.
5. Assemble new alarm. Reconnect alarm wires.
6. Close Control Box and restore power.

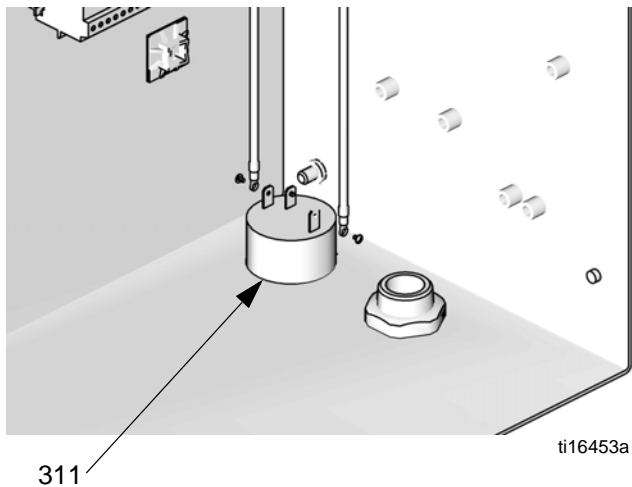


FIG. 12. Replace Alarm

Replace Display Module

1. Follow **Before Servicing**, page 16.
2. The Display Module (63) snaps tightly into the mounting bracket (49). To remove it, lift up on the front of the bracket and, at the same time, pull the Display Module out.
3. Disconnect the CAN cable (64).
4. Replace with a new Display Module.
5. Reconnect the CAN cable (64) as shown.
6. Follow instructions in Manual 3A1244 to update the software on the new Display Module.

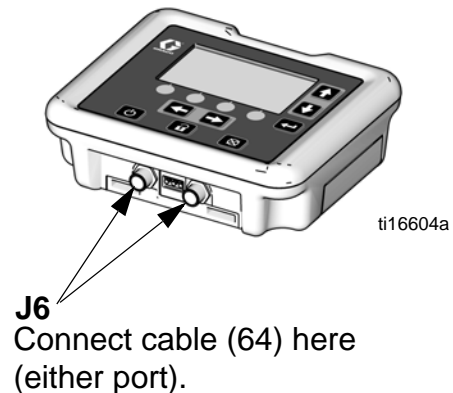
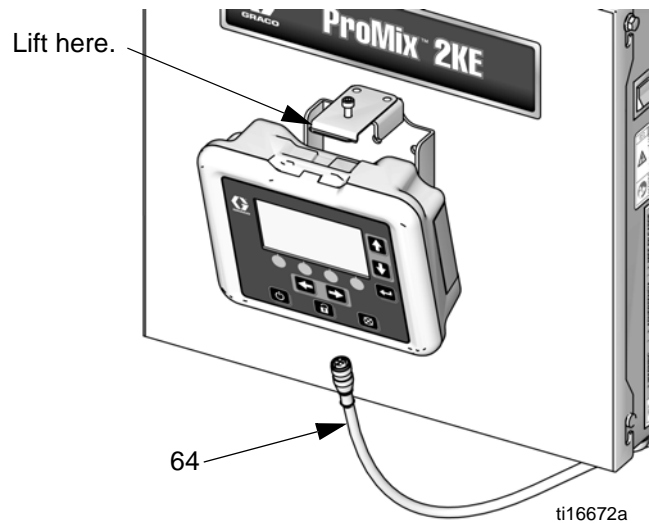


FIG. 13. Replace Display Module

Replace USB Module



1. Follow **Before Servicing**, page 16. Disconnect main power.
2. Open Control Box.
3. **Non-IS Systems:** Disconnect Display Module CAN cable, Advanced Fluid Control Module CAN cable and USB cable from the USB module (340).
IS Systems: Disconnect Alternator CAN cable and USB cable from the USB module (340).
4. Remove ground screw (343) from top of Control Box for USB module and bracket.
5. Remove four mounting screws (341) from USB module and remove module.
6. Follow steps in reverse order to install a new USB module.

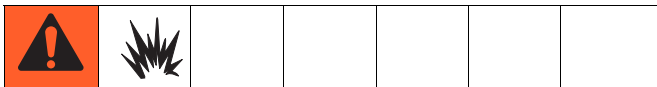
Non-IS Systems Cable Connections:

- CAN cable from J6 (either port) on the Display Module to P3 on the USB Module.
- CAN cable from J8 on the Advanced Fluid Control Module to P4 on the USB Module
- USB cable (345) from the port on the Control Box to the port on the USB Module.

IS Systems Cable Connections:

- CAN cable from J2 on the Alternator Module to P3 on the USB Module.
- USB cable (345) from the port on the Control Box to the port on the USB Module.

7. Follow instructions in Manual 3A1244 to update the software on the new USB Module.
8. Close Control Box and restore power.



To help prevent fire and explosion, do not connect, download, or remove the USB flash drive unless the unit is removed from the hazardous (explosive atmosphere) location. Never leave the USB flash drive in the USB port.

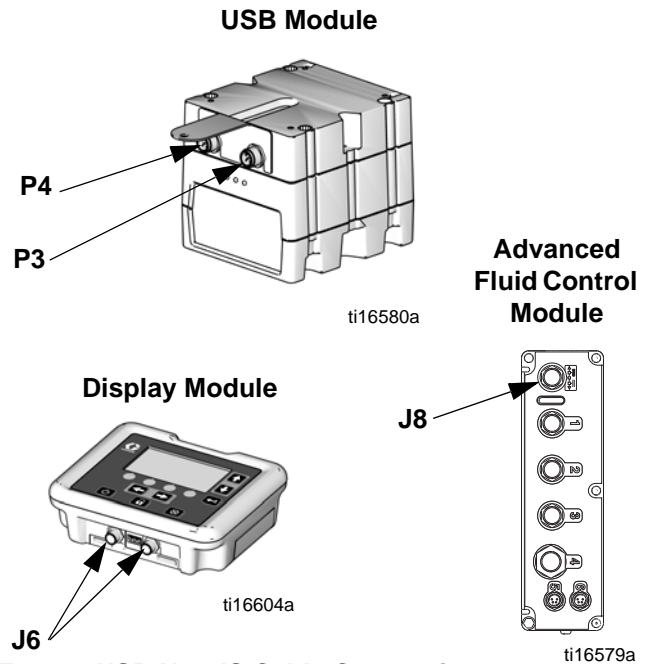


FIG. 14. USB Non-IS Cable Connections

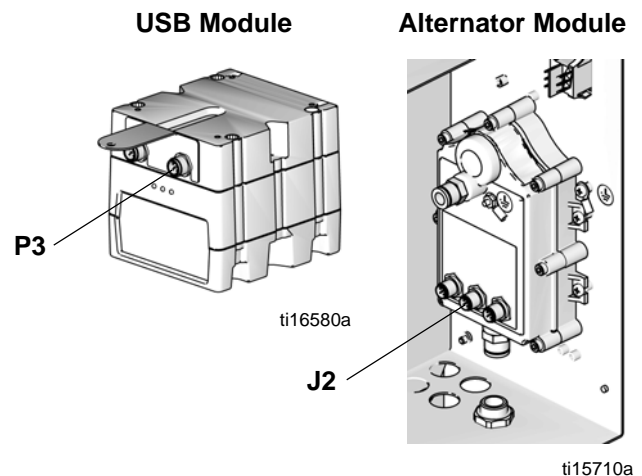
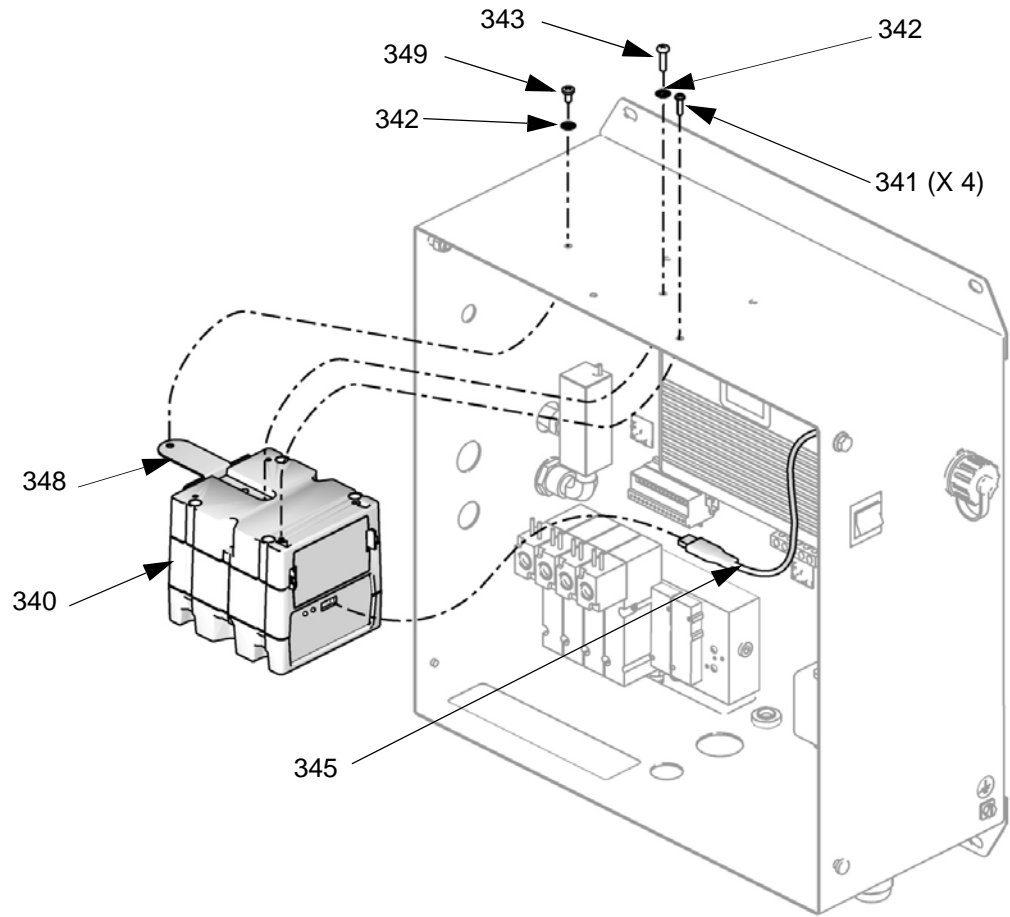


FIG. 15. USB IS Cable Connections.

Update Software

Order Software Token Kit 16D922 to update software. Manuals 3A1244 and 406905 will accompany all software updates. Follow all instructions and warnings in these manuals to update your Display Module, Advanced Fluid Control Module, and USB Module (if used).



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FIG. 16. Replace USB Module

Pump System Air Controls



Remove Air Control Assembly

1. Follow **Before Servicing**, page 16.
2. See FIG. 17. Disconnect pump air lines, main air line, and solenoid air line.

NOTE: You may prefer to remove the A side air motor air line after you remove the assembly from the frame.

3. Loosen four screws (8) from sides of frame. Slide the assembly up and out to remove.
4. Follow steps in reverse order to reinstall air control assembly after repair.

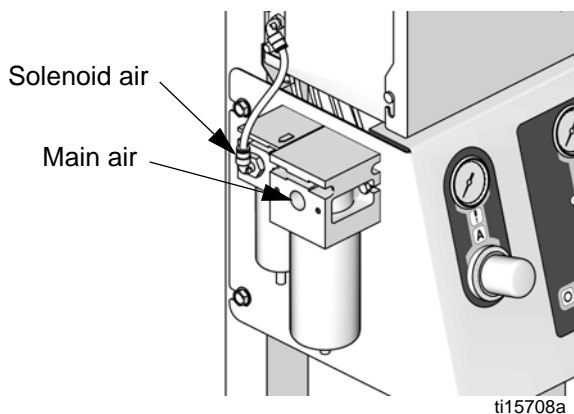
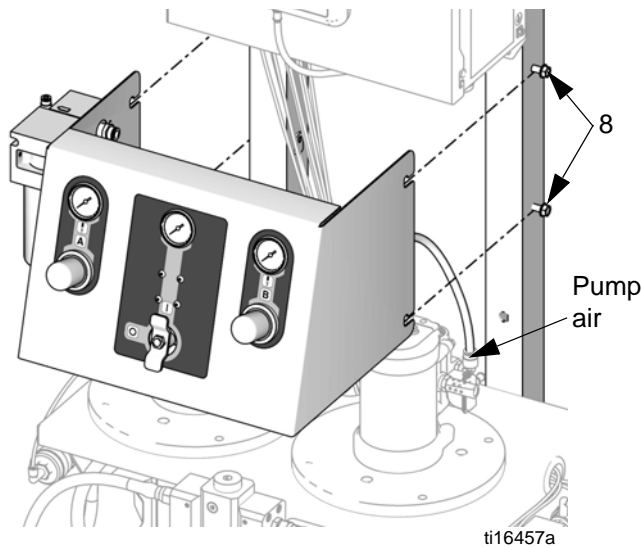


FIG. 17. Remove Air Control Assembly

Replace Pressure Gauge(s)

1. See **Remove Air Control Assembly**, page 25.

See FIG. 18, page 26, for a full diagram of the pump air controls.

2. Disconnect air lines to gauges (203).
3. Remove mounting screws (203a).
4. Remove fittings (211) and gauges (203). Replace as needed.
5. Follow steps in reverse order to reassemble.

Replace Air Regulators

1. See **Remove Air Control Assembly**, page 25.
2. See FIG. 18, page 26. Remove regulator nut (205) and disconnect air lines running to regulator (204).
3. Remove regulator assembly and replace with new. See **Air Controls, Pump-Based Models 24F088-24F115 and 24Z017-24Z018**, page 42.
4. Follow steps in reverse order to reassemble.

Replace Manifold/Ball Valve/Safety Valve

1. See **Remove Air Control Assembly**, page 25.
2. See FIG. 18, page 26. Remove nut (202b) and handle (202a) from front of air control plate.
3. Remove four screws (222) from front of air control plate.
4. Disconnect all air lines.
5. Disconnect fittings (207, 212, 214, 215). Replace as necessary.
6. Disconnect ball valve (202) and safety valve (219). Replace parts as necessary, including manifold. See **Air Controls, Pump-Based Models 24F088-24F115 and 24Z017-24Z018**, page 42.
7. Follow steps in reverse order to reassemble.

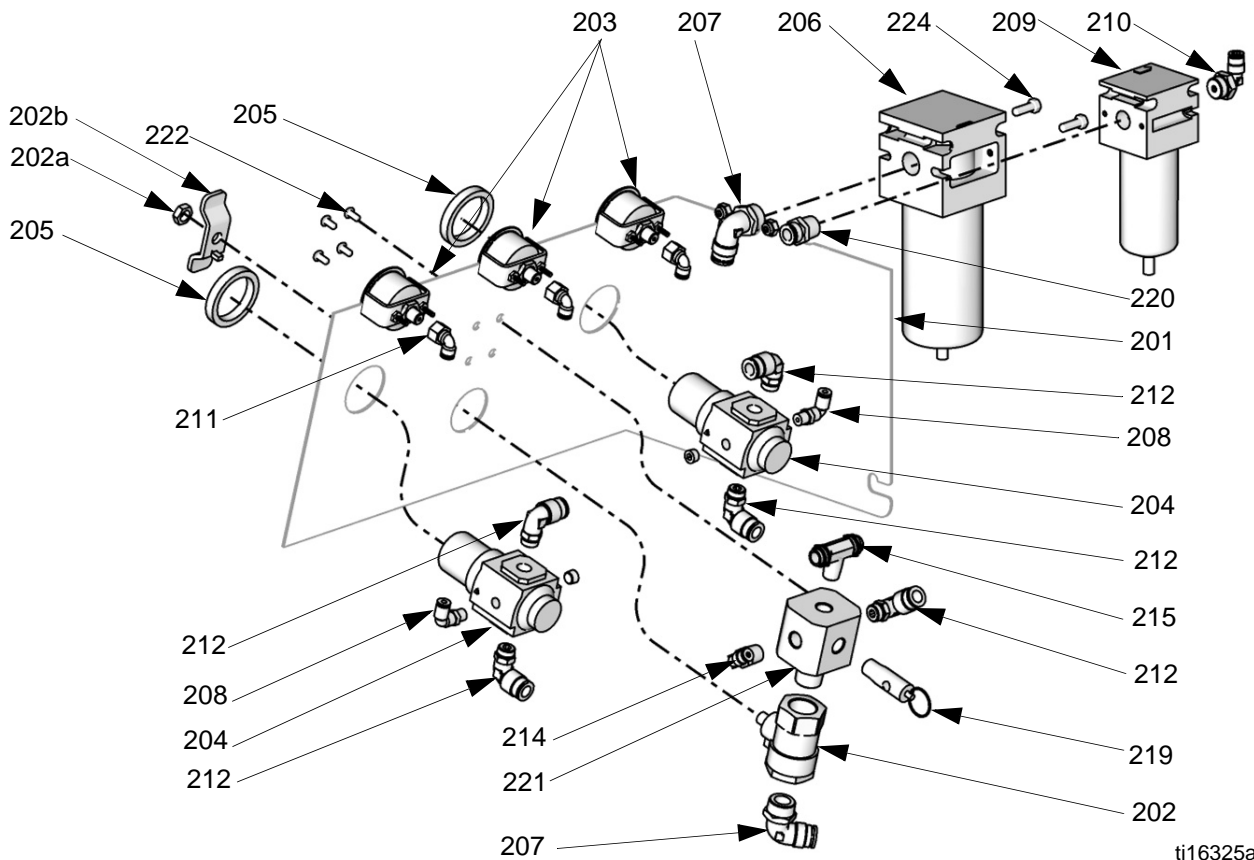


FIG. 18. Air Controls, Pump System

Meter System Air Controls



Remove Air/Fluid Panel

1. Follow **Before Servicing**, page 16.
2. Disconnect main air line and solenoid air line. Disconnect fluid lines where they enter the valve stacks.
3. Remove four screws (8) from sides of frame.
4. Remove air/fluid panel assembly.
5. Follow steps in reverse order to reinstall assembly after repair.

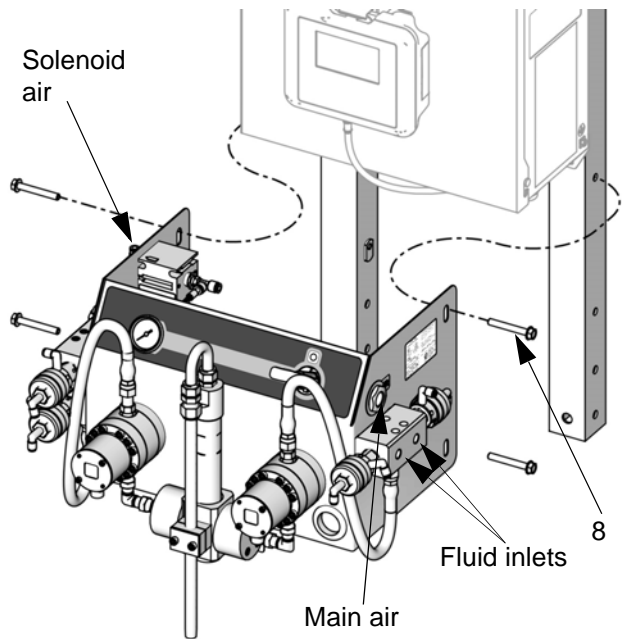


FIG. 19. Remove Air/Fluid Panel

Replace Ball Valve

1. See **Remove Air/Fluid Panel**, page 26.
2. Remove screw (106b) and washer (106c) from the handle on the front of the panel.
3. Remove fittings (113, 114, 121, 122) and ball valve (106).
4. Replace fittings and/or valve as needed.
5. Follow steps in reverse order to reassemble.

Replace Pressure Gauge(s)

1. See **Remove Air/Fluid Panel**, page 26.
2. Disconnect air line to gauge (105).
3. Remove mounting screws (105a).
4. Remove fitting (114) and gauge (105). Replace as needed.
5. Follow steps in reverse order to reassemble.

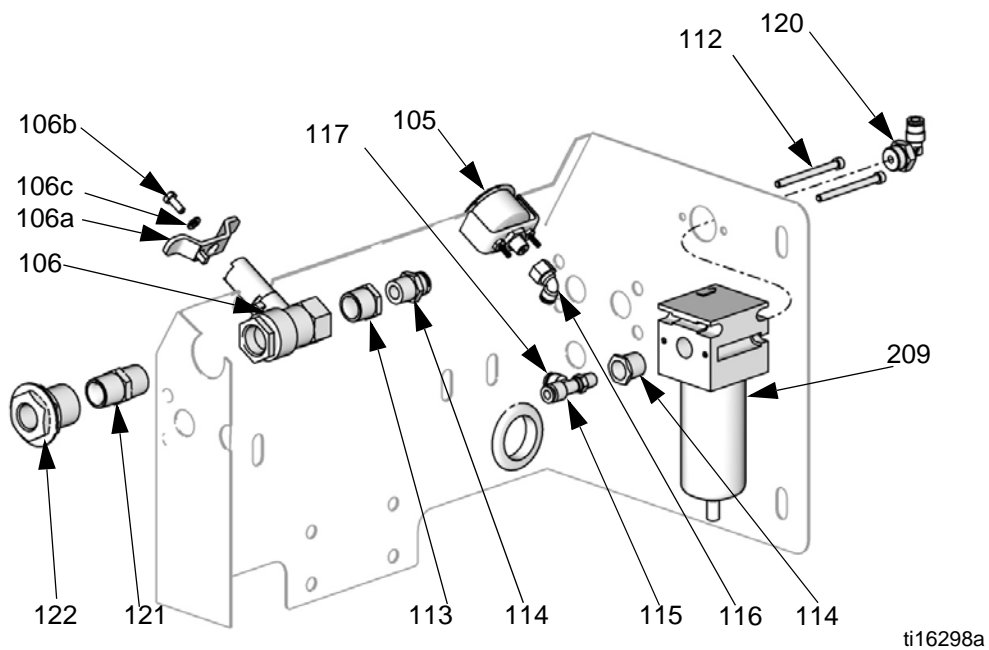


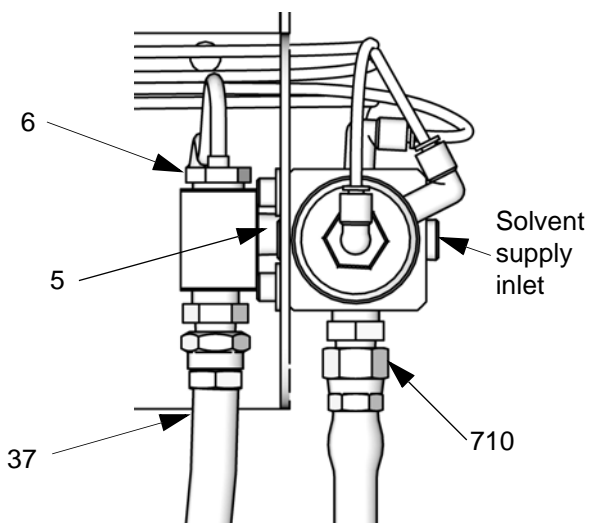
FIG. 20. Air Controls, Meter System

Fluid Controls



Remove Dosing Valve Stacks

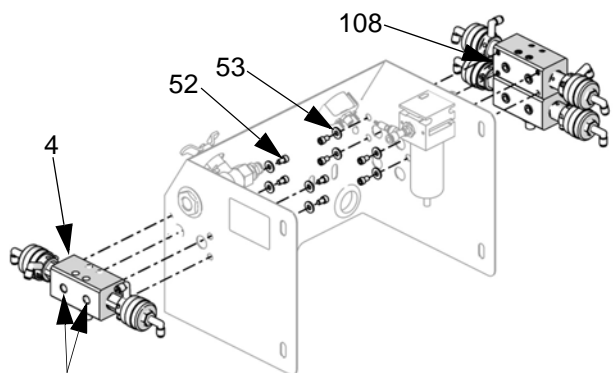
1. Follow **Before Servicing**, page 16.
2. **Meter-based systems:** See **Remove Air/Fluid Panel**, page 26.
3. **Pump-based systems:** On inside of panel, remove fluid inlet hose (37). Remove fluid outlet pressure sensor (6). Disconnect fluid fitting (5) from dosing valve stacks (4, 108 if 3-color system). Disconnect fluid outlet lines from fitting (710). Disconnect solvent supply hose from inlet.



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FIG. 21. Disconnect fluid lines

4. **Meter-based systems:** Disconnect fluid inlet lines from valve stacks. See **FIG. 22**.
5. Remove four bolts (52) and washers (53) from inside the panel to remove each valve stack (4, 108 if 3-color system).



Fluid inlets, meter-based system.

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FIG. 22. Remove valve stacks

6. **3-Color System.** Remove four bolts (711) from top of valve stack. Separate the two manifolds (701 and 706).
7. **Replace Seat(s):** To replace a seat on a single valve, order Kit 16A560 (see page 59) or Acid Kit 26A035 (see page 61). Remove dosing valve (705) from manifold (701 or 706), then remove and replace seat (703) and o-rings (702 and 704).
8. **Service Dosing Valve:** Order Kit 15U933 (see page 59) or Acid Kit 24T817 (see page 61). Follow all instructions and warnings in manual 312782 to rebuild the dosing valve.
9. **Valve Manifold Rebuild:** For full service of your valve stack (1-color or 3-color), order Kit 24H254 (see page 59) or Acid Kit 26A187 (see page 61). Follow directions in **Dosing Valve Manifold Rebuild**, page 29.

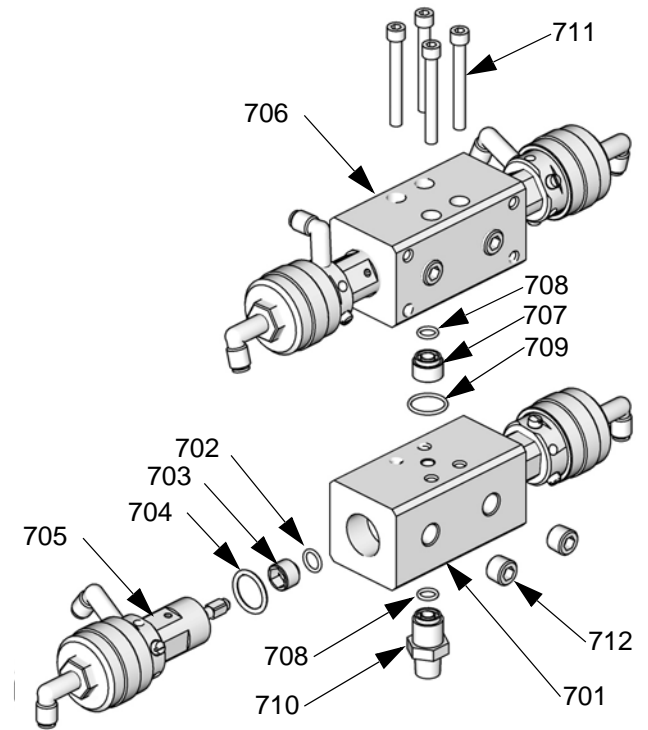
Dosing Valve Manifold Rebuild

Order Kit 24H254 (see page 59) or Acid Kit 26A187 (see page 61). Use all parts in the kit.

1. Follow Steps 1 - 5 in **Remove Dosing Valve Stacks**, page 28.
2. Remove fitting (710) and o-ring (708).
3. Remove the dosing valve (705), then remove seat (703) and o-rings (702 and 704) from each side of each manifold (701, 706).
4. **3-Color Systems.** Remove the spacer (707) and o-rings (708 and 709) from between the two manifolds (706).
5. **3-Color Systems.** Install new o-ring (708) on fitting (710). Install fitting on bottom of 3-color manifold (701).

NOTE: Relieve spring tension prior to installing the valve (705) into the manifold (701 or 706).

6. Install the small o-ring (702), the seat retainer (703) and the large o-ring (704) into the manifold, then install the valve (705). Torque to 35-40 ft-lb (47-54 N•m). Repeat for each valve.
7. **3-Color Systems.** Install new o-ring (708) on the spacer (707). Install new o-ring (709) on the bottom of the 1-color manifold (706). Align manifolds (701 and 706). Install four screws (711). Torque to 8-10 ft-lb (11-14 N•m).
8. Use four bolts (52) and washers (53) to reattach the valve stacks (4, 108 if present).
9. Reconnect fluid lines. See FIG. 21, page 28.
10. Reconnect air lines. See System Pneumatic Schematic, pages 64- 65. See also the **Tubing Chart and Diagrams**, page 43 for pump-based systems or page 51 for meter-based systems.



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FIG. 23. Rebuild Dosing Valve Stacks

Repair Flow Meters



Coriolis Meter

1. Follow **Before Servicing**, page 16.
2. To remove and service the Coriolis meter, see manual 313599.

G3000 and G3000A Meter

Removal

1. Follow **Before Servicing**, page 16.
2. Remove cable harness (118) and fluid lines.
3. Remove two screws (110) and washers (109) holding the meter (103) and the spacer (104) to the fluid plate (101).
4. Service meter as instructed in the meter manual 308778.

Installation

1. Secure meter (103) and spacer (104) to the fluid plate (101) with screws (110) and washers (109).
2. Connect cable harness (118) and fluid line.
3. Calibrate meter as instructed in the Operation manual 3A0869.

Repair Mix Manifold

1. Follow **Before Servicing**, page 16.
2. See FIG. 25, page 31. Disconnect fluid lines.
3. Holding onto the mix manifold (13), remove four screws (52) and washers (53) that hold the mix manifold (13) to the fluid plate (101, meter systems) or to the pump frame (pump systems). Remove the manifold.
4. Service mix manifold as instructed in Mix Manifold manual 312781.

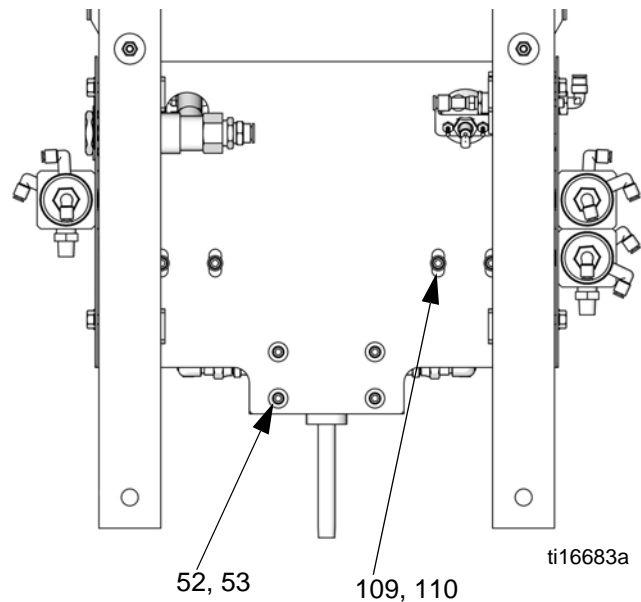
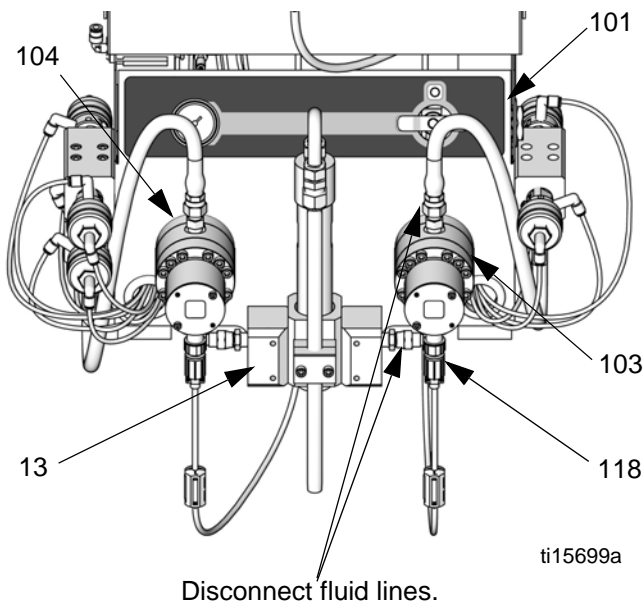
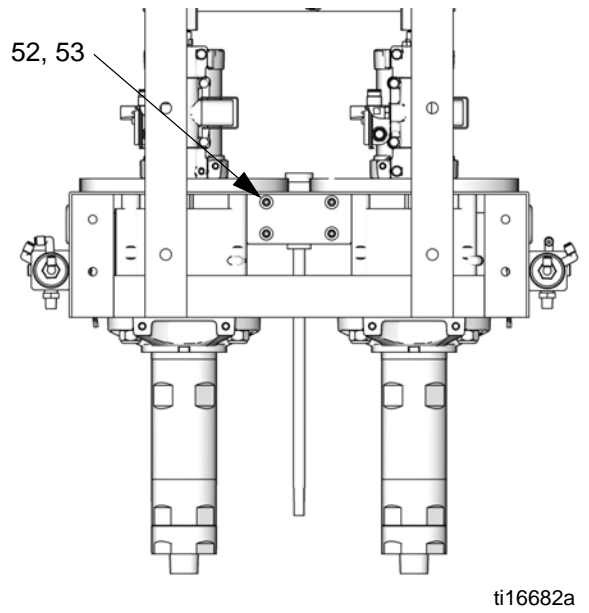
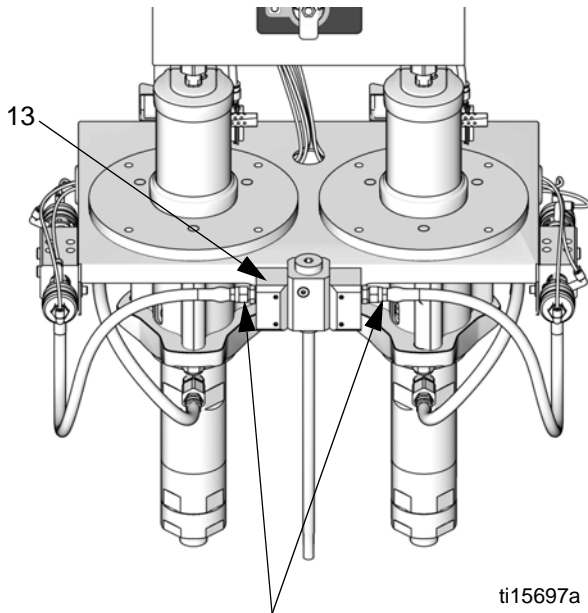


FIG. 24. Meter System Manifold Removal



Disconnect fluid lines.

FIG. 25. Pump System Manifold Removal

Pump Assembly



Prior to service, remove the displacement pump first, then the air motor.

Remove the Displacement Pump

See pages 33-35 for detailed illustration.

1. Follow **Pressure Relief Procedure**, page 12.
2. Disconnect the fluid line from the pump outlet. See FIG. 26.
3. **Merkur Pumps:** Remove the tie rod shield (26).
Merkur Bellows Pumps: Remove the coupler shield (79).
4. **Merkur Pumps:** Hold the flats of the air motor shaft with a wrench. Use another wrench to loosen the coupling nut (16).
Merkur Bellows Pumps: Hold the coupling nut (16) with a wrench. Use another wrench to turn the motor shaft. To avoid damage to the bellows top cap and the D-shaped seal, **do not turn the coupling nut.**

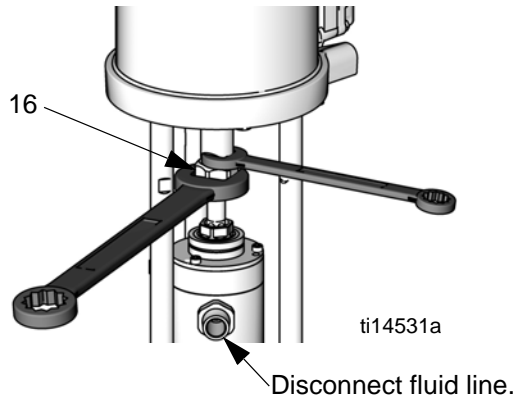


Fig. 26. Loosen the coupling nut

5. Lower the coupling nut (16) enough to remove the coupling collars (15), and then lift up the motor shaft and remove the coupling nut (16).

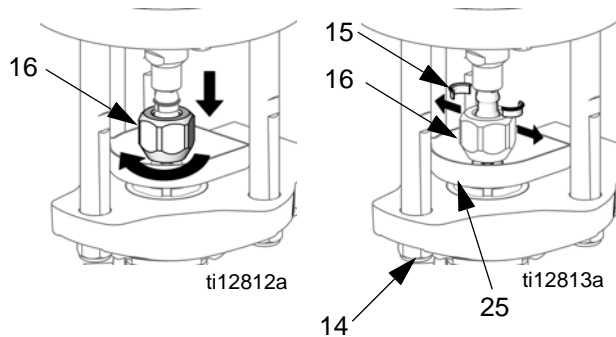


FIG. 27. Remove the coupling collars

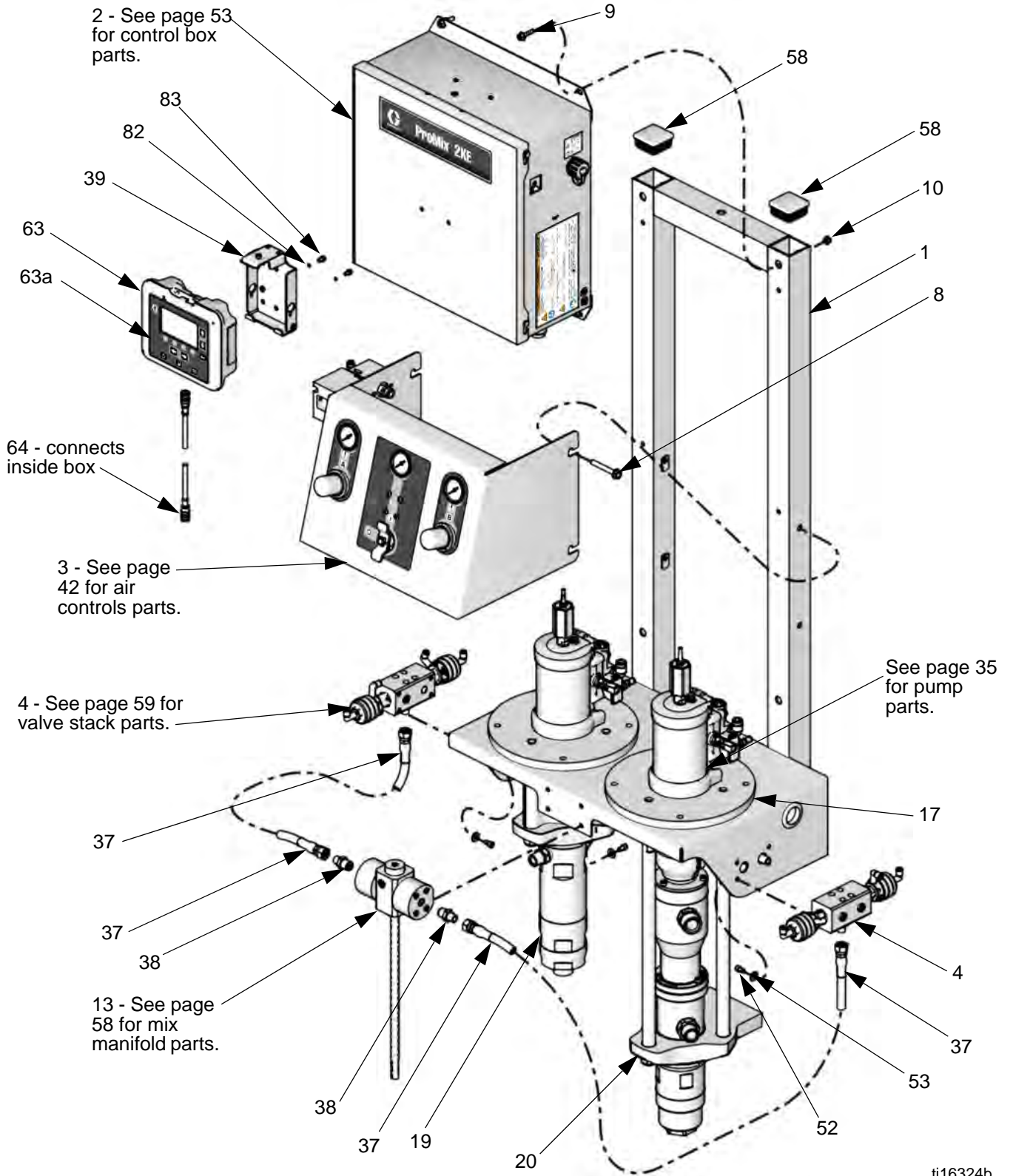
6. **Merkur Pumps:** Pull up on the TSL reservoir (25) to remove.
7. Use a socket to remove the tie rod nuts (14).
8. Carefully remove the displacement pump, with the pump adapter attached.
9. Clamp the adapter plate in a vise to service the displacement pump.
10. See your displacement pump manual (312792 for Merkur standard or 312793 for Merkur bellows) for service and parts information.

Remove the Air Motor

1. Follow **Pressure Relief Procedure**, page 12.
2. Follow **Remove the Displacement Pump**, page 32.
3. Disconnect air lines, the reed switch CAN cable, and the linear sensor cable.
4. Remove four screws (8) then remove the air control panel (3). See **Remove Air Control Assembly**, page 25.
5. Remove four mounting screws (49) and washers (48) from the under side of the pump frame.
6. **Systems with M02LH0 air motor (2.5 in.):** Remove three screws (49) and washers (48), then remove the adapter plate (17) from the bottom of the air motor.
7. Carefully lift the air motor up and out. Leave the tie rods and muffler attached or remove them, as you prefer.


Parts


Pump-Based Proportioners, Models 24F088-24F115

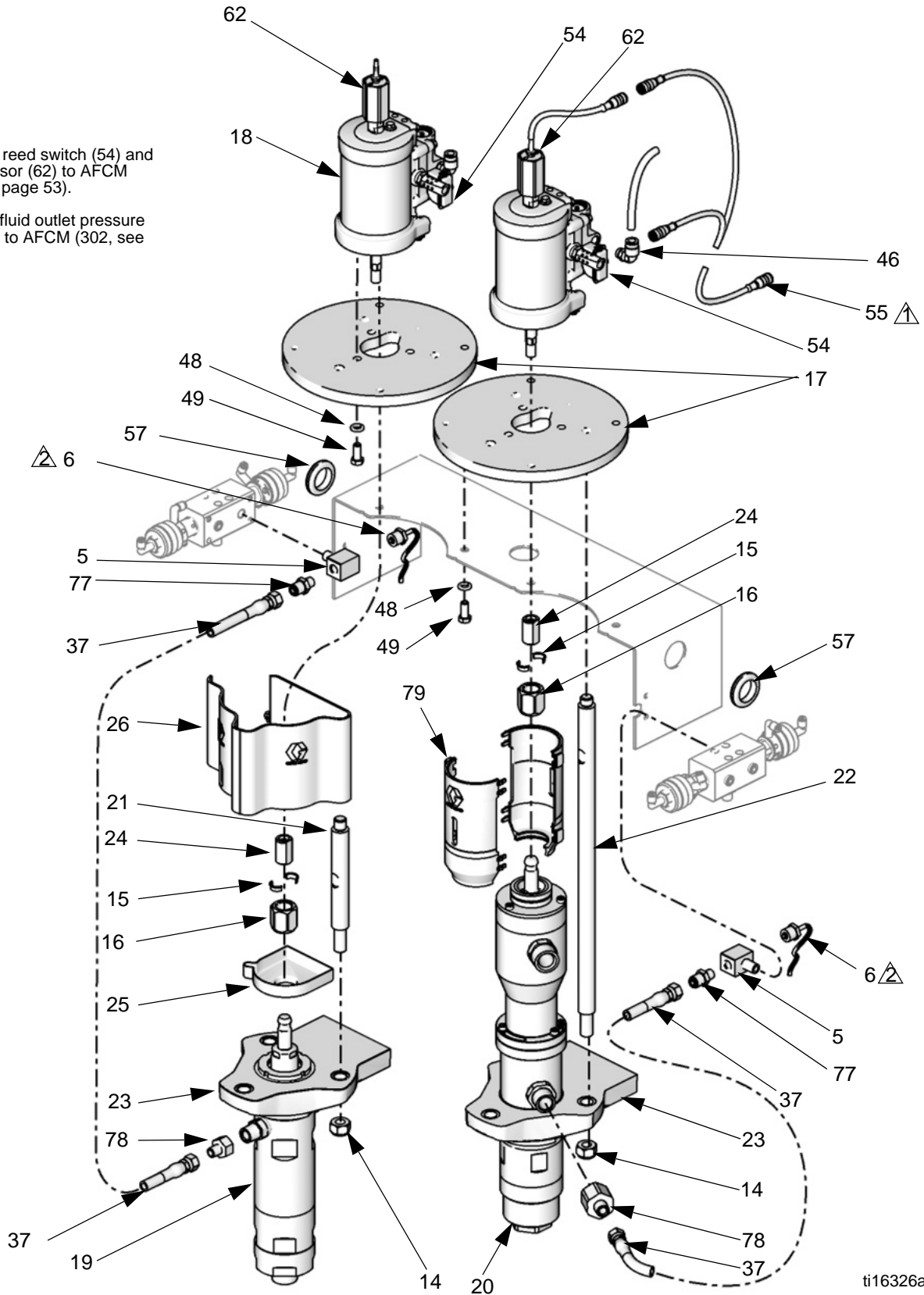


ti16324b

Pumps

 Connects reed switch (54) and linear sensor (62) to AFCM (302, see page 53).

 Connects fluid outlet pressure sensor (6) to AFCM (302, see page 53).



ti16326a

Pump-Based Models 24F088-24F115

| Ref. | Part | Description | Qty. |
|------|--|--|------|
| 1 | ----- | FRAME | 1 |
| 2 | ----- | CONTROL BOX, see page 53, Refs. 301-339 | 1 |
| 3 | ----- | CONTROLS, air; see page 42, Refs. 201-226 | 1 |
| 4 | ----- | VALVE, stack, 1 color/1 solvent; see page 59, Refs. 702-706, 708, and 710 | 2 |
| 5 | 16F164 | FITTING, pressure sensor, fluid outlet | 2 |
| 6 | 15M669 | SENSOR, pressure, fluid outlet | 2 |
| 8 | ----- | SCREW, machine, serrated flange, hex head, 5/16-18 x 2.25 in. | 4 |
| 9 | 112547 | SCREW, flange, hex head, 1/4-20 | 4 |
| 10 | 109478 | NUT | 4 |
| 13 | 262399 | MIX MANIFOLD, dynamic dosing, see page 58, Refs. 601-632 | 1 |
| 14 | 15U606 | NUT, lock, m16 x 2 | 6 |
| 15 | 184128 | COLLAR, coupling | 4 |
| 16 | 15T311 | NUT, coupler | 2 |
| 17 | 16F249 | ADAPTER, plate, see Table, page 37 | 2 |
| 18 | M02LH0 M12LN0 M18LN0 | AIR MOTOR, Merkur, see Table, page 37, see manual 312796 for repair/parts 2.5 in. (M02xxx) with linear sensor 6.0 in. (M12xxx) with linear sensor 7.5 in. (M18xxx) with linear sensor | 2 |
| 19 | LW050A LW075A LW100A LW125A LW150A | DISPLACEMENT PUMP A, see Table, page 37, see manual 312792 for repair/parts Merkur, 50cc Merkur, 75cc Merkur, 100cc Merkur, 125cc Merkur, 150cc | 1 |
| 20 | LB100B LB150B LW050A LW075A LW100A LW125A LW150A | DISPLACEMENT PUMP B, see Table, page 37, see manual 312793 for repair/parts Merkur Bellows with u-cup, 100cc Merkur Bellows with u-cup, 150cc Merkur, 50cc Merkur, 75cc Merkur, 100cc Merkur, 125cc Merkur, 150cc | 1 |
| 21 | 15M662 | ROD, tie, pump A, see manual 312794 for repair/parts | 3 |
| 22 | 15M662 15U691 | ROD, tie, pump B Merkur pump, see manual 312794 for repair/parts Merkur Bellows pump, see manual 312795 for repair/parts | 3 |
| 23 | See Table | ADAPTER, displacement pump | 1 |
| 24 | 16G463 | COUPLING, adapter; see Table, page 37 | 2 |
| 25 | See Table | RESERVOIR, tsl | 1 |
| 26 | 24A959 | SHIELD, tie rod | 1 |
| 27 | ----- | USB MODULE, see page 54, Refs. 340-347 | |
| 37 | 24N345 239083 | HOSE, coupled 3:1, 23:1, and 30:1 systems 45:1 systems | 4 |
| 38 | 166421 | FITTING, pipe | 2 |
| 39 | 277853 | BRACKET, mounting, display module | 1 |
| 40▲ | 15X214 | LABEL, warning, USB, not shown | 1 |
| 45 | 105335 | SCREW, machine, pan head, M4 x 0.7, for tie rod guard, not shown | 1 |

| Ref. | Part | Description | Qty. |
|------|------------------|--|-----------|
| 46 | 115841 C38211 | ELBOW, air inlet M02xxx air motors All other air motors | 2 |
| 47 | 15T632 | KIT, Air Flow Switch, see page 62, Refs. 900-904, not used on 45:1 systems | 1 or 2 |
| 48 | 100133 | WASHER, lock M02xxx air motors All other air motors | 14 8 |
| 49 | 100680 | SCREW, cap, hex hd M02xxx air motors All other air motors | 14 8 |
| 51 | 101970 | PLUG, pipe, hdls, not shown | 4 |
| 52 | C19798 | SCREW, cap, socket head | 12 |
| 53 | 100527 | WASHER, plain | 12 |
| 54 | 24A032 | SWITCH, reed assembly | 2 |
| 55 | 16E917 | CABLE, IS and reed | 2 |
| 57 | 120685 | GROMMET | 3 |
| 58 | 115313 | PLUG, tube | 2 |
| 62 | 24G849 24G848 | KIT, LINEAR SENSOR, IS; includes sensor, fitting, magnet with holder, and o-ring M02xxx air motor All other air motors | 2 |
| 63 | 16E883 | MODULE, display | 1 |
| 63a | 24X284 | KIT, membrane repair | 1 |
| 64 | 123278 15V206 | CABLE, CAN, IS, yel m std x f rev. (Alternator Powered Systems) blue f rev. x f rev. (Electric Powered Systems) | 1 |
| 66 | ----- | ELECTRIC POWER ASSEMBLY, Models 24F088-24F101, see page 55, Refs. 401-411 | 1 |
| 67 | ----- | ALTERNATOR POWER ASSEMBLY, Models 24F102-24F115, see page 56, Refs. 501-517 | 1 |
| 68▲ | 15W776 | LABEL, warning, not shown | 1 |
| 77 | 156971 | FITTING, nipple, short | 2 |
| 78 | 16H491 512351 | ADAPTER M02xxx air motor All other air motors | 2 |
| 79 | 24A640 | SHIELD, Bellows | 2 |
| 82 | 111307 | WASHER, shipped loose, for Display Module | 2 |
| 83 | 121224 | SCREW, shipped loose, for Display Module | 2 |
| 84 | 16G475 | MAGNET, with holder | 2 |
| 87 | 16F793 | CARD, alarm/icon, not shown | 1 |
| 325▲ | 15W598 | LABEL, warning | 1 |

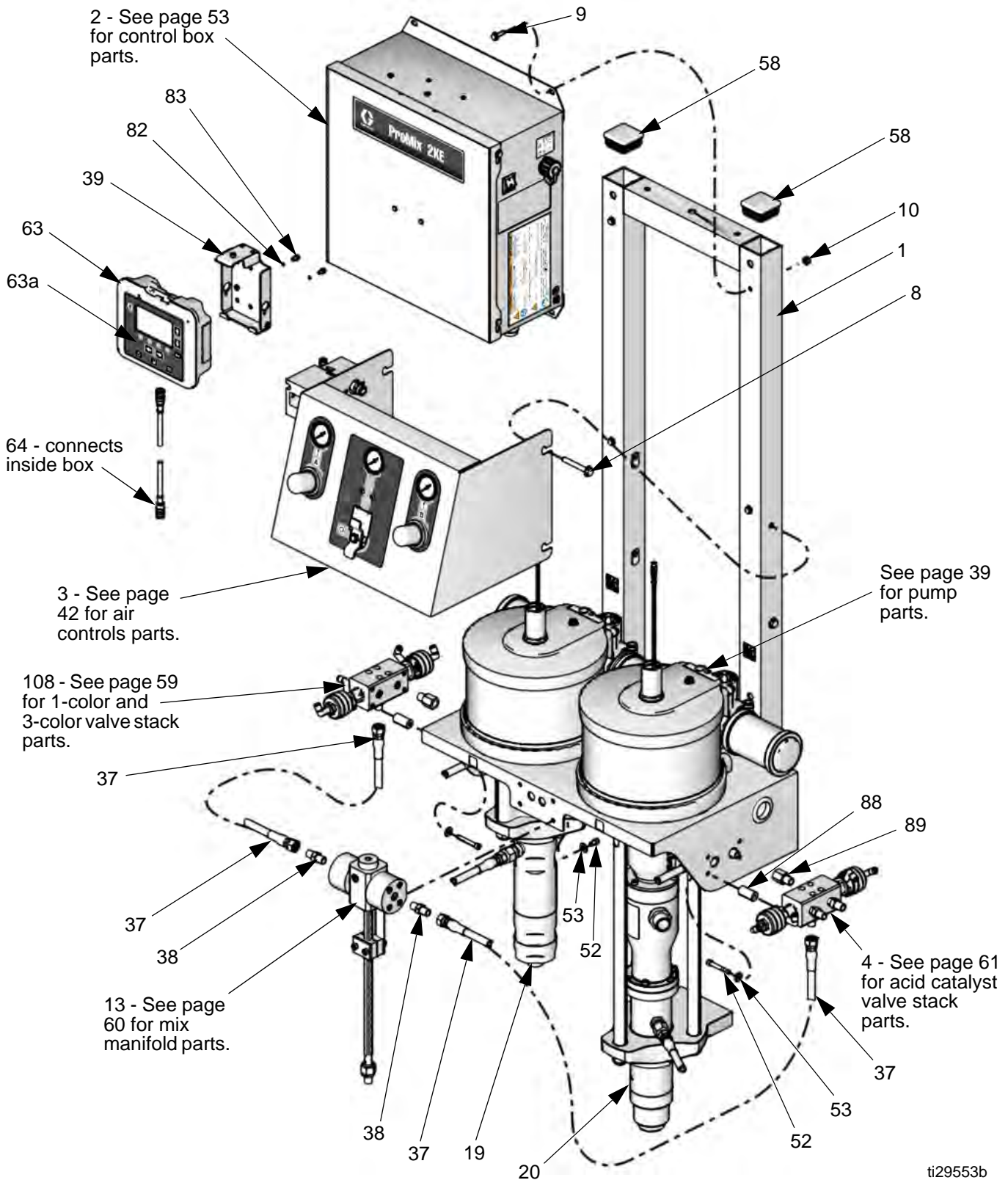
--- Not sold separately.

▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.

Parts that Vary by Model, Pump-Based

| Model | | Adapter Plate (Item 17) | Air Motor (Item 18) | "A" Lower (Item 19) | "B" Lower (Item 20) | "A" Tie Rod (Item 21) | "B" Tie Rod (Item 22) | Lower Adapter (Item 23) | Coupling (Item 24) | TSL Reservoir (Item 25) |
|--------|--------|----------------------------|------------------------|---------------------------|---------------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------|-------------------------------|
| Non-IS | IS | | | | | | | | | |
| 24F088 | 24F102 | 16F249 | M02LH0 | LW125A | LW125A | 15M662 | 15M662 | 15T394 | 16G463 | 24A627 |
| 24F089 | 24F103 | ----- | M12LN0 | LW100A | LW100A | 15M662 | 15M662 | 15T393 | ----- | 24A626 |
| 24F090 | 24F104 | ----- | M12LN0 | LW075A | LW075A | 15M662 | 15M662 | 15T392 | ----- | 24A625 |
| 24F091 | 24F105 | ----- | M12LN0 | LW050A | LW050A | 15M662 | 15M662 | 15T391 | ----- | 24A622 |
| 24F092 | 24F106 | 16F249 | M02LH0 | LW150A | LB150B | 15M662 | 15U691 | 15T395 | 16G463 | 24A628 |
| 24F093 | 24F107 | ----- | M12LN0 | LW100A | LB100B | 15M662 | 15U691 | 15T393 | ----- | 24A626 |
| 24F094 | 24F108 | ----- | M18LN0 | LW100A | LB100B | 15M662 | 15U691 | 15T393 | ----- | 24A626 |
| 24F095 | 24F109 | 16F249 | M02LH0 | LW125A | LW125A | 15M662 | 15M662 | 15T394 | 16G463 | 24A627 |
| 24F096 | 24F110 | ----- | M12LN0 | LW100A | LW100A | 15M662 | 15M662 | 15T393 | ----- | 24A626 |
| 24F097 | 24F111 | ----- | M12LN0 | LW075A | LW075A | 15M662 | 15M662 | 15T392 | ----- | 24A625 |
| 24F098 | 24F112 | ----- | M12LN0 | LW050A | LW050A | 15M662 | 15M662 | 15T391 | ----- | 24A622 |
| 24F099 | 24F113 | 16F249 | M02LH0 | LW150A | LB150B | 15M662 | 15U691 | 15T395 | 16G463 | 24A628 |
| 24F100 | 24F114 | ----- | M12LN0 | LW100A | LB100B | 15M662 | 15U691 | 15T393 | ----- | 24A626 |
| 24F101 | 24F115 | ----- | M18LN0 | LW100A | LB100B | 15M662 | 15U691 | 15T393 | ----- | 24A626 |

Pump-Based Proportioners, Models 24Z017 and 24Z018 (Acid)

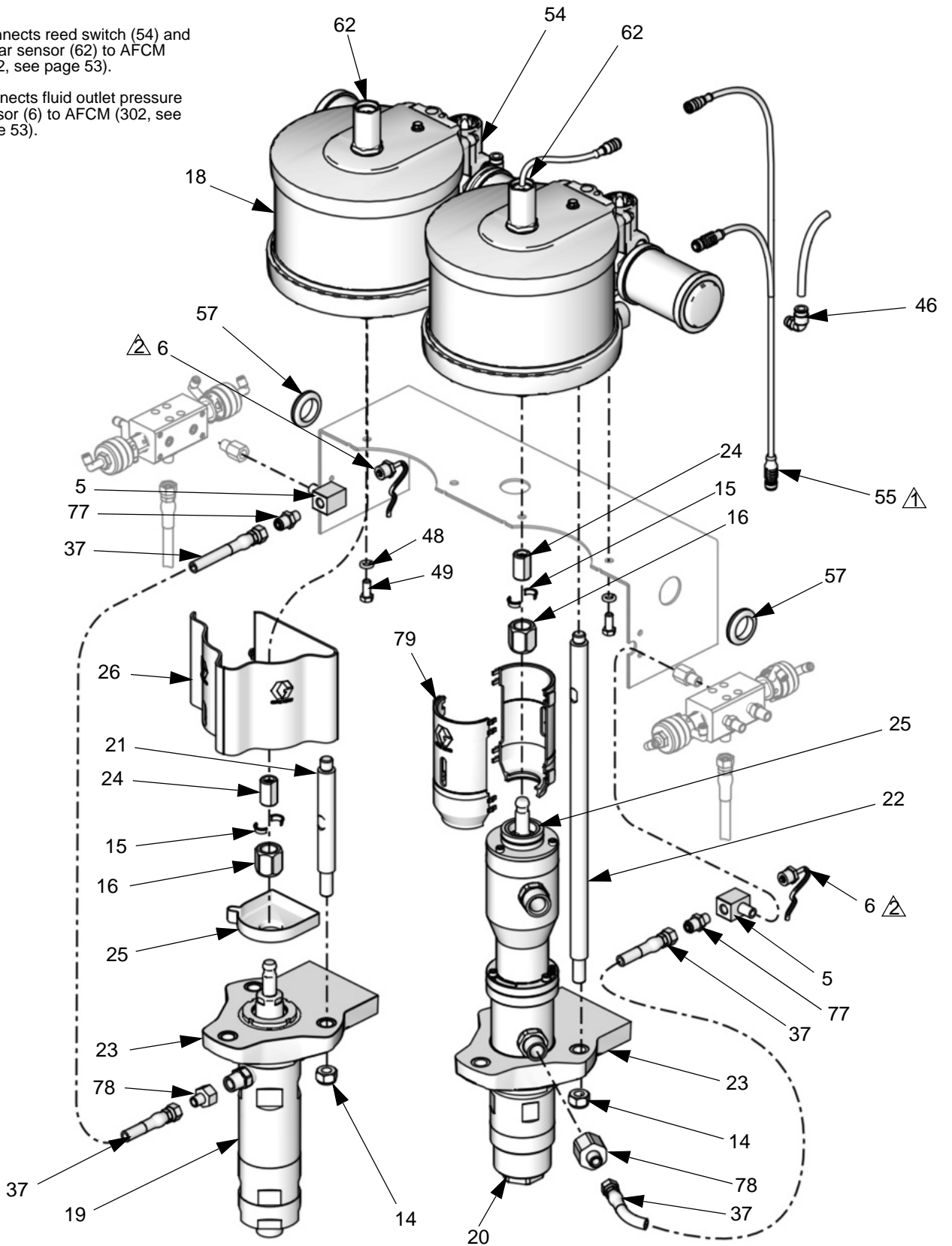


ti29553b

Pumps (Acid)

⚠ Connects reed switch (54) and linear sensor (62) to AFCM (302, see page 53).

⚠ Connects fluid outlet pressure sensor (6) to AFCM (302, see page 53).



Pump-Based Models 24Z017 and 24Z018 (Acid)

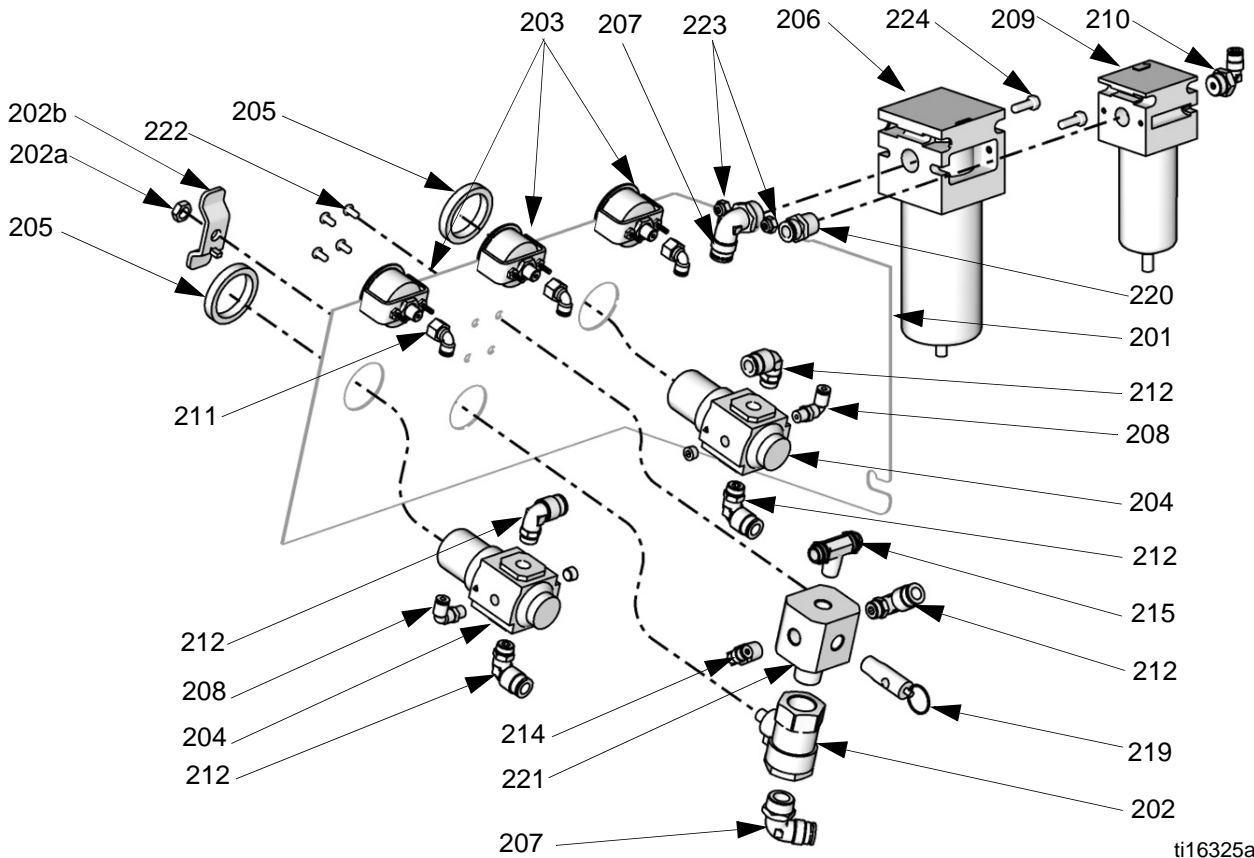
| Ref. | Part | Description | Qty. |
|------|--------|---|--------|
| 1 | ----- | FRAME | 1 |
| 2 | ----- | CONTROL BOX, see page 53, Refs. 301-339 | 1 |
| 3 | ----- | CONTROLS, air; see page 42, Refs. 201-226 | 1 |
| 4 | ----- | VALVE, stack, acid/catalyst, 1 color/1 solvent; see page 61, Refs. 702-706, 708, and 710 | 1 |
| 5 | 16F164 | FITTING, pressure sensor, fluid outlet | 2 |
| 6 | 16G621 | SENSOR, pressure, fluid outlet | 2 |
| 8 | ----- | SCREW, machine, serrated flange, hex head, 5/16-18 x 2.25 in. | 4 |
| 9 | 113796 | SCREW, flange, hex head, 1/4-20 | 4 |
| 10 | 109478 | NUT | 4 |
| 13 | 24Y547 | MIX MANIFOLD, dynamic dosing, see page 60, Refs. 601-634 | 1 |
| 14 | 15U606 | NUT, lock, m16 x 2 | 6 |
| 15 | 184128 | COLLAR, coupling | 2 |
| 16 | 15T311 | NUT, coupler | 2 |
| 18 | 289855 | AIR MOTOR, Merkur, see manual 312796 for repair/parts | 2 |
| 19 | 289849 | DISPLACEMENT PUMP A, Merkur, 100cc, see manual 312795 for repair/parts | 1 |
| 20 | 26A094 | DISPLACEMENT PUMP B, Merkur Bellows with u-cup, 100cc, see manual 312795 for repair/parts | 1 |
| 21 | 15M662 | ROD, tie, pump A | 3 |
| 22 | 15U691 | ROD, tie, pump B | 3 |
| 23 | 16U426 | ADAPTER, displacement pump | 1 |
| 24 | 184128 | COLLAR, coupling | 4 |
| 25 | 15T339 | RESERVOIR, tsl | 1 |
| 26 | 24A959 | SHIELD, tie rod (includes part 45) | 1 |
| 27 | ----- | USB MODULE, see page 54, Refs. 340-347 | |
| 37 | 24N345 | HOSE, coupled | 4 |
| 38 | 121907 | FITTING, pipe | 4 |
| 39 | 277853 | BRACKET, mounting, display module | 1 |
| 40▲ | 15X214 | LABEL, warning, USB, not shown | 1 |
| 45 | 105335 | SCREW, machine, pan head, M4 x 0.7, for tie rod guard, not shown (Comes with tie rod shield, no. 26?) | 1 |
| 46 | C38211 | ELBOW, air inlet | 2 |
| 47 | 15T632 | KIT, Air Flow Switch, see page 62, Refs. 900-904 | 1 or 2 |
| 48 | 100133 | WASHER, lock | 8 |
| 49 | 111799 | SCREW, cap, hex head | 8 |
| 51 | 101970 | PLUG, pipe, hdls, not shown | 4 |
| 52 | C19798 | SCREW, cap, socket head | 12 |
| 53 | 115814 | WASHER, plain | 12 |
| 54 | 24A032 | SWITCH, reed assembly | 2 |
| 55 | 16E917 | CABLE, IS and reed | 2 |
| 57 | 120685 | GROMMET | 3 |
| 58 | 115313 | PLUG, tube | 2 |
| 63 | 16E883 | MODULE, display | 1 |
| 63a | 24X284 | KIT, membrane repair | 1 |
| 64 | | CABLE, CAN, IS, 123278 yel m std x f rev. (Alternator Powered Systems) 15V206 blue f rev. x f rev. (Electric Powered Systems) | 1 |
| 66 | ----- | ELECTRIC POWER ASSEMBLY, Models 24F088-24F101 and Model 24Z018, see page 55, Refs. 401-411 | 1 |
| 67 | ----- | ALTERNATOR POWER ASSEMBLY, Models 24F102-24F115 and Model 24Z017, see page 56, Refs. 501-517 | 1 |
| 68▲ | 15W776 | LABEL, warning, not shown | 1 |
| 78 | 17L466 | FITTING, adapter | 2 |

| Ref. | Part | Description | Qty. |
|----------|--------|--|------|
| 79 | 16C310 | SHIELD, Bellows | 2 |
| 82 | 111307 | WASHER, shipped loose, for Display Module | 2 |
| 83 | 121224 | SCREW, shipped loose, for Display Module | 2 |
| 84 | 16G475 | MAGNET, with holder | 2 |
| 87 | 16F793 | CARD, alarm/icon, not shown | 1 |
| 88 | 17L817 | SPACER, aluminum | 8 |
| 89 | 17A106 | FITTING, adapter | 2 |
| 108 | ----- | VALVE, stack, 1 color/1 solvent or 3 color/1 solvent; see page 59, Refs. 702-706, 708, and 710 | 1 |
| 325 ▲ | 15X214 | LABEL, warning | 1 |

--- Not sold separately.

▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.

Air Controls, Pump-Based Models 24F088-24F115 and 24Z017-24Z018

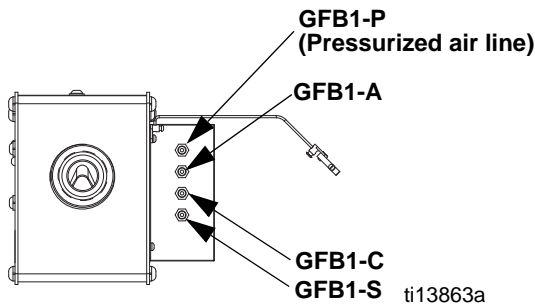
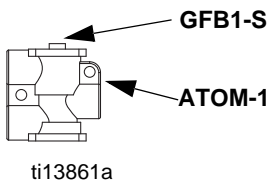
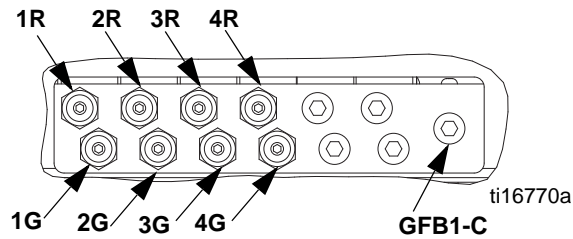


| Ref. | Part | Description | Qty. | Ref. | Part | Description | Qty. |
|------|--------|---------------------------------|------|------|--------|--------------------------|------|
| 201 | ---- | PLATE, air controls | 1 | 210 | 114153 | ELBOW | 1 |
| 202 | 110225 | VALVE, vented, 2-way | 1 | 211 | 15T498 | ELBOW | 3 |
| 202a | ---- | HANDLE | 1 | 212 | 115841 | ELBOW | 5 |
| 202b | ---- | NUT, handle | 1 | 214 | 114469 | ELBOW | 1 |
| 202c | 290167 | TAG, warning, not shown | 1 | 215 | 502524 | CONNECTOR, tube | 1 |
| 203 | 15T500 | GAUGE, air pressure | 3 | 219 | 113498 | VALVE, safety | 1 |
| 203a | ---- | SCREW, mounting, gauge | 6 | 220 | 114485 | CONNECTOR, male, 3/8 npt | 1 |
| 204 | 116513 | REGULATOR, air | 2 | 221 | 16F701 | MANIFOLD, pump | 1 |
| 205 | 116514 | NUT, air regulator | 2 | 222 | 551787 | SCREW, cap | 4 |
| 206 | 15D795 | FILTER, air | 1 | 223 | 109478 | NUT, lock | 2 |
| 206a | 15D890 | ELEMENT, 40 micron | 1 | 224 | 100022 | SCREW, cap, hex | 2 |
| 207 | ---- | ELBOW, male | 2 | | | | |
| 208 | 15T866 | ELBOW, swivel, 1/8 npt x 5/32 T | 2 | | | | |
| 209 | 114124 | FILTER, air | 1 | | | | |
| 209a | 15D909 | ELEMENT, 5 micron | 1 | | | | |

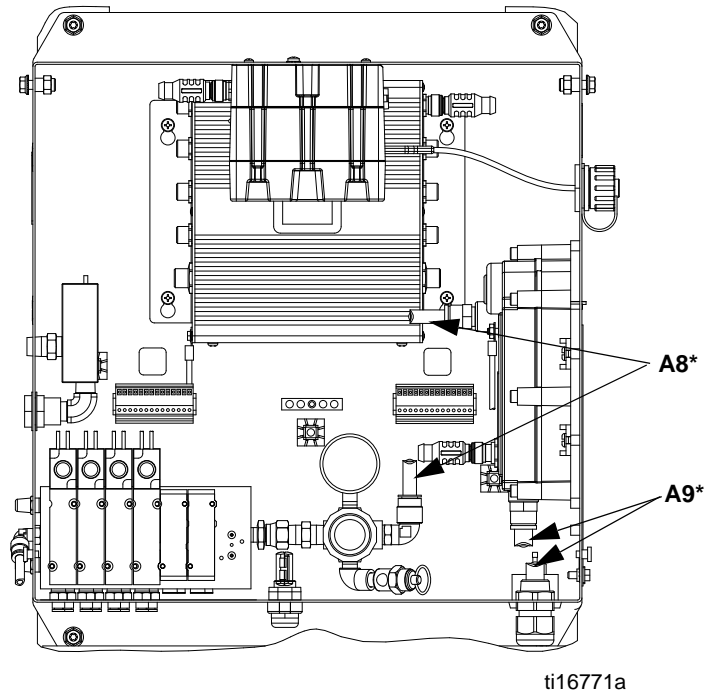
Tubing Chart, Pump-Based Models 24F088-24F115 and 24Z017-24Z018

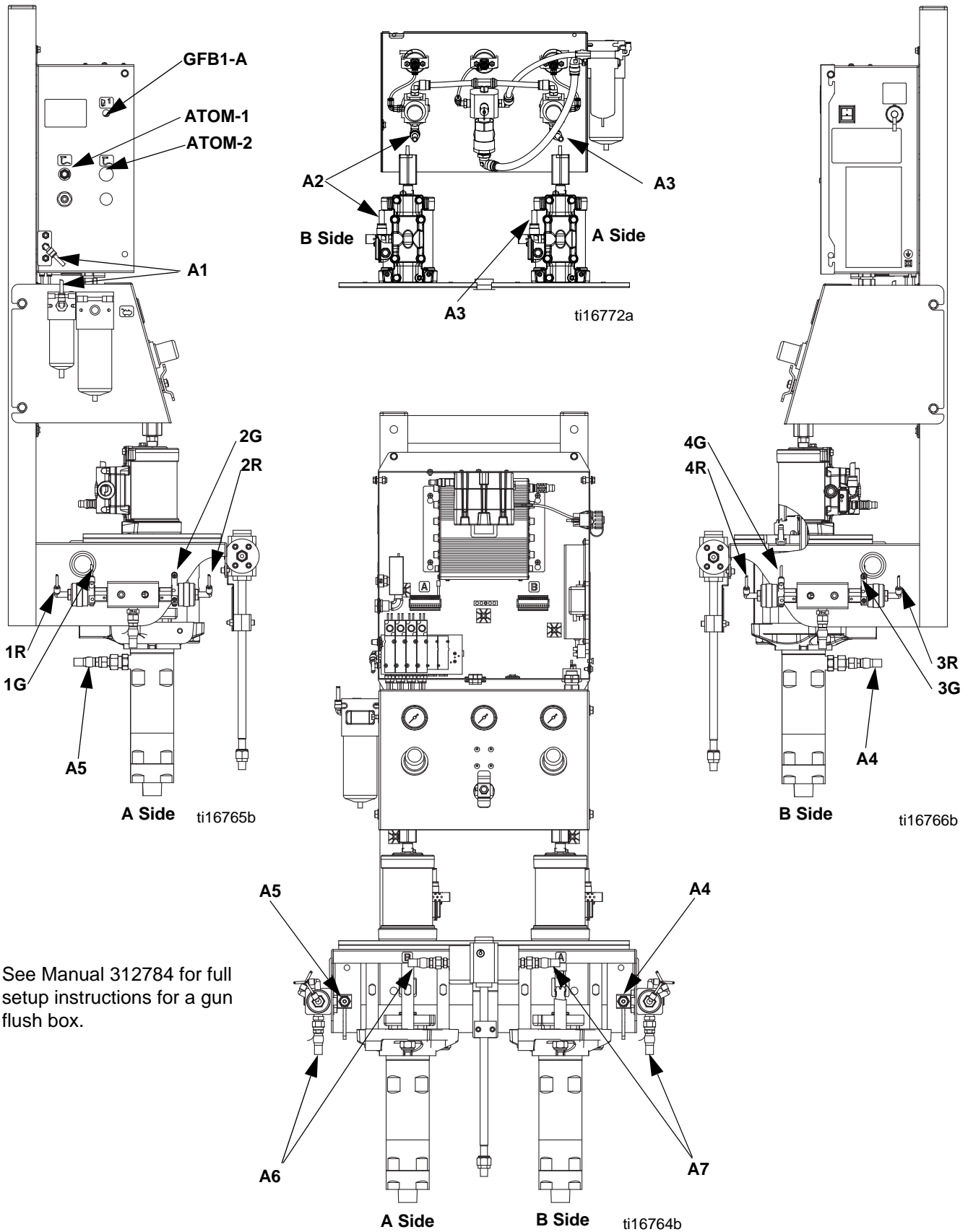
| Type | Color | Description | Starting Point | Ending Point | Tube OD in. (mm) |
|-------|---------|-------------------------------|----------------|------------------------------|------------------|
| Air | Green | Solvent Valve A On | 1G | 1G | 0.156 (4.0) |
| Air | Green | Dose Valve A On | 2G | 2G | 0.156 (4.0) |
| Air | Green | Solvent Valve B On | 3G | 3G | 0.156 (4.0) |
| Air | Green | Dose Valve B On | 4G | 4G | 0.156 (4.0) |
| Air | Red | Solvent Valve A Off | 1R | 1R | 0.156 (4.0) |
| Air | Red | Dose Valve A Off | 2R | 2R | 0.156 (4.0) |
| Air | Red | Solvent Valve B Off | 3R | 3R </td <td>0.156 (4.0)</td> | 0.156 (4.0) |
| Air | Red | Dose Valve B Off | 4R | 4R | 0.156 (4.0) |
| Air | Natural | Solenoid Air | A1 | A1 | 0.25 (6.3) |
| Air | Natural | Air Regulator to Pump B | A2 | A2 | 0.375 (9.5) |
| Air | Natural | Air Regulator to Pump A | A3 | A3 | 0.375 (9.5) |
| Fluid | ---- | Pump B to Valve Stack B | A4 | A4 | ---- |
| Fluid | ---- | Pump A to Valve Stack A | A5 | A5 | ---- |
| Fluid | ---- | Valve Stack A to Mix Manifold | A6 | A6 | ---- |
| Fluid | ---- | Valve Stack B to Mix Manifold | A7 | A7 | ---- |
| Air | Natural | Air Regulator to Alternator* | A8 | A8 | 0.375 (9.5) |
| Air | Black | Alternator Air Exhaust* | A9 | A9 | 0.5 (12.7) |

* Used only on IS models.

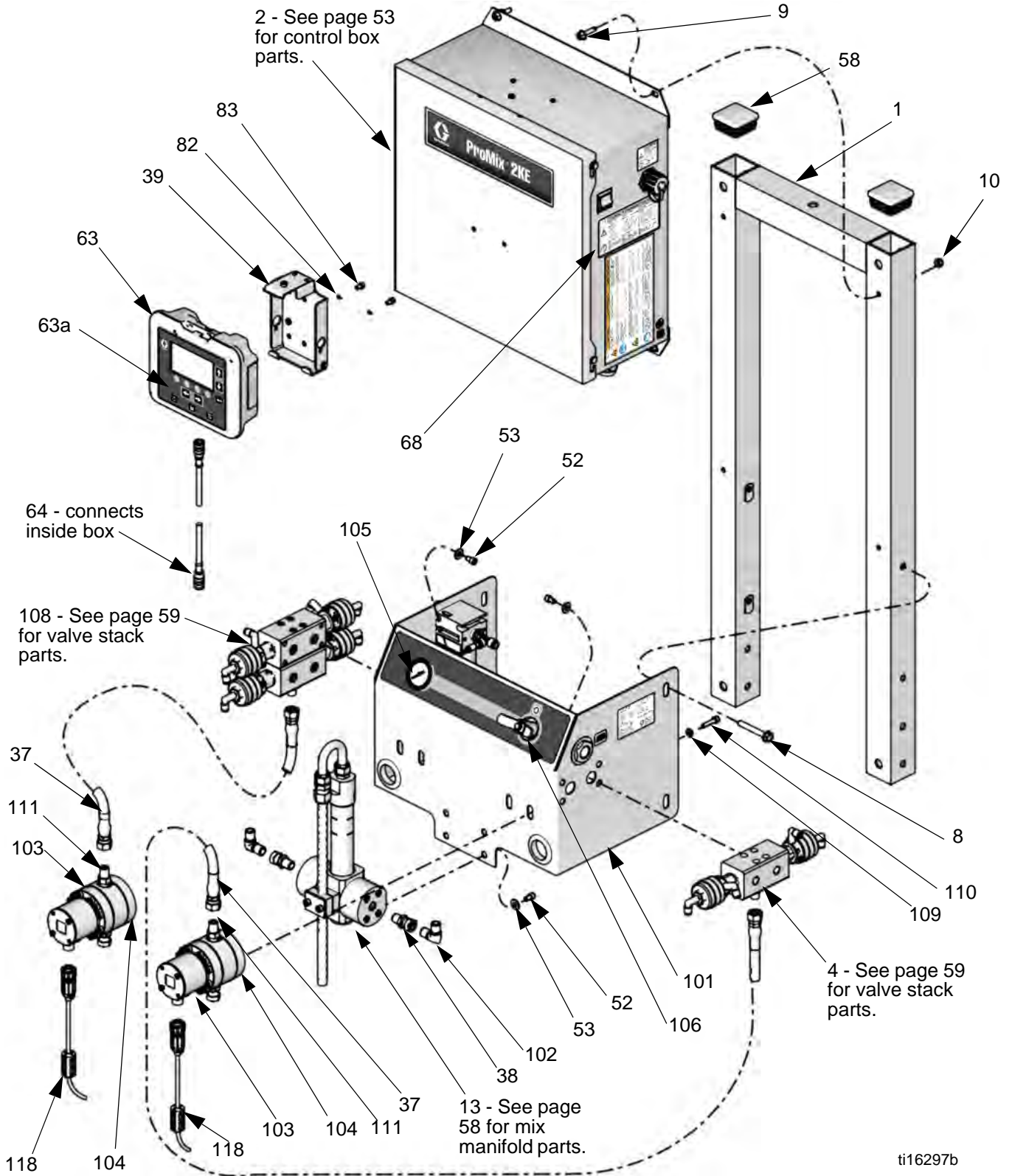


* IS Models

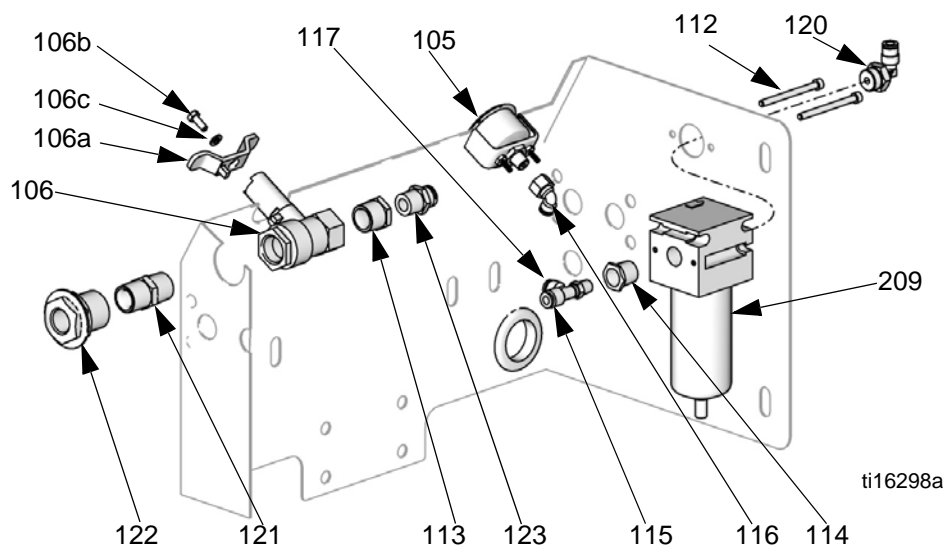




Meter-Based Proportioners, Models 24F080-24F087



ti16297b



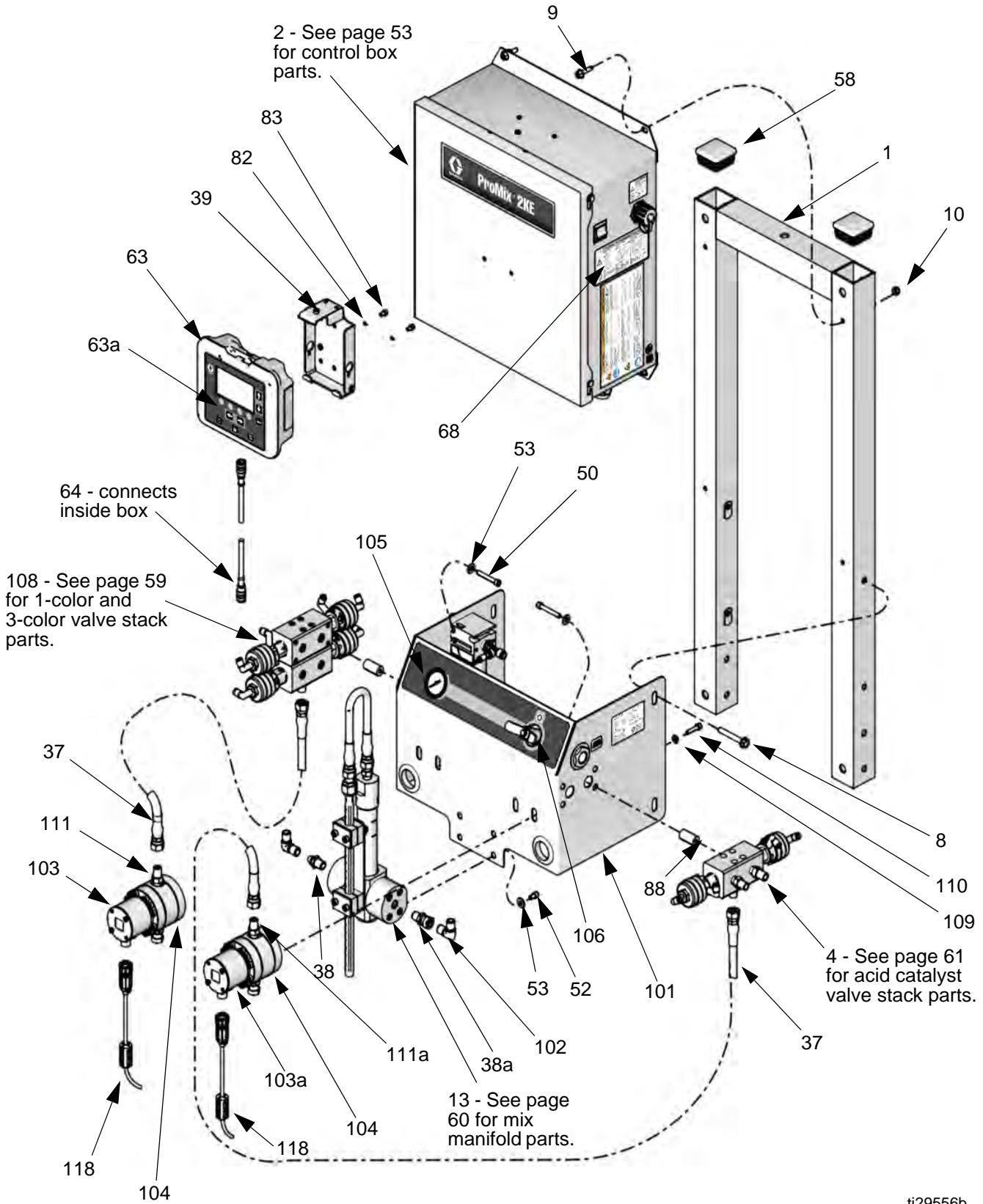
Meter-Based Models 24F080-24F087

| Ref. | Part | Description | Qty. |
|------|--------|---|--------|
| 1 | ---- | FRAME, meter | 1 |
| 2 | ---- | CONTROL BOX, see page 53, Refs. 301-339 | 1 |
| 4 | ---- | VALVE, stack, 1 color/1 solvent; see page 59, Refs. 702-706, 708, and 710 1-Color Models 3-Color Models | 2 1 |
| 8 | ---- | SCREW, machine, serrated flange, hex head, 5/16-18 x 2.25 in. | 4 |
| 9 | 112547 | SCREW, flange, hex hd | 4 |
| 10 | 109478 | NUT | 4 |
| 13 | 262398 | MIX MANIFOLD, sequential dosing, see page 58, Refs. 601-623 | 1 |
| 27 | ---- | USB MODULE, see page 54, Refs. 340-347 | |
| 35 | 117356 | VALVE, solenoid (3-color models; see page 53) | 2 |
| 37 | 24N345 | HOSE, coupled, 1.5 ft | 2 |
| 38 | 114339 | FITTING, union, swivel, 1/4 npt, sst | 4 |
| 39 | 277853 | BRACKET, mounting, display module | 1 |
| 40▲ | 15X214 | LABEL, warning, USB, not shown | 1 |
| 47 | 15T632 | KIT, Air Flow Switch, see page 62, Refs. 900-904 | 1 or 2 |
| 52 | C19798 | SCREW, cap, socket head | 12 |
| 53 | 100527 | WASHER, plain | 12 |
| 57 | 120685 | GROMMET | 2 |
| 58 | 115313 | PLUG, tube | 2 |
| 63 | 16E883 | MODULE, display | 1 |
| 63a | 24X284 | KIT, membrane repair | 1 |
| 64 | 123278 | CABLE, IS, CAN, yellow, m std x f rev. | 1 |
| 66 | ---- | ELECTRIC POWER ASSEMBLY, Models 24F080-24F083, see page 55, Refs. 401-411 | 1 |
| 67 | ---- | ALTERNATOR POWER ASSEMBLY, Models 24F084-24F087, see page 56, Refs. 501-517 | 1 |
| 68▲ | 15W776 | LABEL, warning | 1 |
| 82 | 111307 | WASHER, shipped loose, for Display Module | 2 |
| 83 | 121224 | SCREW, shipped loose, for Display Module | 2 |
| 87 | 16F793 | CARD, alarm/icon, not shown | 1 |
| 90 | 16G607 | BUSHING, strain relief | 1 |
| 101 | ---- | PLATE, fluid | 1 |

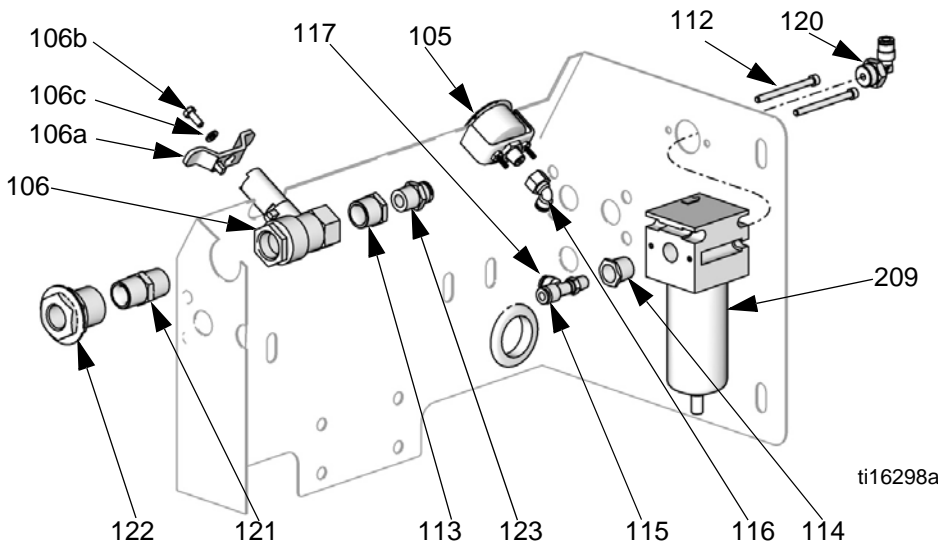
| Ref. | Part | Description | Qty. |
|------|--------|--|------|
| 102 | 114342 | ELBOW, 1/4-18 npsm | 2 |
| 103 | 289813 | METER, gear, G3000 | 2 |
| 104 | 16F063 | SPACER, meter | 2 |
| 105 | 15T500 | GAUGE, air pressure | 1 |
| 105a | ----- | SCREW, mounting, gauge | 6 |
| 106 | 118762 | VALVE, ball, vented, 1/2 in. | 1 |
| 106a | ----- | HANDLE, ball valve | 1 |
| 106b | ----- | SCREW | 1 |
| 106c | ----- | WASHER | 1 |
| 108 | ----- | VALVE, stack, 3 clr/1 fl, see page 59, 3-Color Models only | 1 |
| 109 | 100527 | WASHER, plain | 4 |
| 110 | 117029 | SCREW, M6x25 | 4 |
| 111 | 501867 | VALVE, check | 2 |
| 112 | 107404 | SCREW, cap, sockethead | 2 |
| 113 | 100081 | BUSHING, pipe | 1 |
| 114 | C19675 | BUSHING, reducer | 2 |
| 115 | 15T498 | SWIVEL, 90°, 5/32T x 1/8 npt(f) | 1 |
| 116 | C20365 | FITTING, tee | 1 |
| 117 | 517312 | CONNECTOR, male | 1 |
| 118 | 17C910 | HARNESS, cable, w/connector, G3000 | 2 |
| 120 | 114153 | ELBOW, male, swivel | 1 |
| 121 | 158491 | FITTING, nipple | 1 |
| 122 | 512905 | FITTING, bulkhead | 1 |
| 123 | 114366 | FITTING, tube | 1 |
| 124 | 117793 | HOLDER, tie | 6 |
| 209 | 114124 | FILTER, air, 3/8 npt, see page 63 for filter elements. | 1 |
| 230 | 262028 | TOOL KIT, installation | 1 |
| 325▲ | 15W598 | LABEL, warning | 1 |

▲ Replacement Danger and Warning labels, tags, and cards are available at no cost.

Meter-Based Proportioners, Models 24Z013-24Z016 (Acid)



ti29556b



ti16298a

Meter-Based Models 24Z013-24Z016 (Acid)

| Ref. | Part | Description | Qty. |
|------|--------|--|--------|
| 1 | ---- | FRAME, meter | 1 |
| 2 | ---- | CONTROL BOX, see page 53, Refs. 301-339 | 1 |
| 4 | ---- | VALVE, stack, acid catalyst; 1 color/1 solvent; see page 61, Refs. 702-706, 708, and 710 | 1 |
| 8 | ---- | SCREW, machine, serrated flange, hex head, 5/16-18 x 2.25 in. | 4 |
| 9 | 113796 | SCREW, flange, hex hd | 4 |
| 10 | 109478 | NUT | 4 |
| 13 | 24Y546 | MIX MANIFOLD, sequential dosing, see page 60, Refs. 601-623 | 1 |
| 27 | ---- | USB MODULE, see page 54, Refs. 340-347 | |
| 35 | 117356 | VALVE, solenoid (3-color models; see page 53) | 2 |
| 37 | 24N345 | HOSE, coupled, 1.5 ft | 2 |
| 38 | 114339 | FITTING, union, swivel, 1/4 npt, sst | 2 |
| 38a | 17K624 | FITTING, union, swivel, 1/4 npt, 316 sst | 2 |
| 39 | 277853 | BRACKET, mounting, display module | 1 |
| 40▲ | 15X214 | LABEL, warning, USB, not shown | 1 |
| 47 | 15T632 | KIT, Air Flow Switch, see page 62, Refs. 900-904 | 1 or 2 |
| 50 | 101885 | SCREW, cap, socket head | 8 |
| 52 | C19798 | SCREW, cap, socket head | 4 |
| 53 | 100527 | WASHER, plain | 16 |
| 57 | 120685 | GROMMET | 2 |
| 58 | 115313 | PLUG, tube | 2 |
| 63 | 16E883 | MODULE, display | 1 |
| 63a | 24X284 | KIT, membrane repair | 1 |
| 64 | 123278 | CABLE, IS, CAN, yellow, m std x f rev. | 1 |
| 66 | ---- | ELECTRIC POWER ASSEMBLY, Models 24Z015-24Z016, see page 55, Refs. 401-411 | 1 |
| 67 | ---- | ALTERNATOR POWER ASSEMBLY, Models 24Z013-24Z014, see page 56, Refs. 501-517 | 1 |
| 68▲ | 15W776 | LABEL, warning | 1 |
| 82 | 111307 | WASHER, shipped loose, for Display Module | 2 |
| 83 | 121224 | SCREW, shipped loose, for Display Module | 2 |
| 87 | 16F793 | CARD, alarm/icon, not shown | 1 |
| 88 | 17L817 | SPACER, aluminum | 8 |
| 90 | 16G607 | BUSHING, strain relief | 1 |

Parts

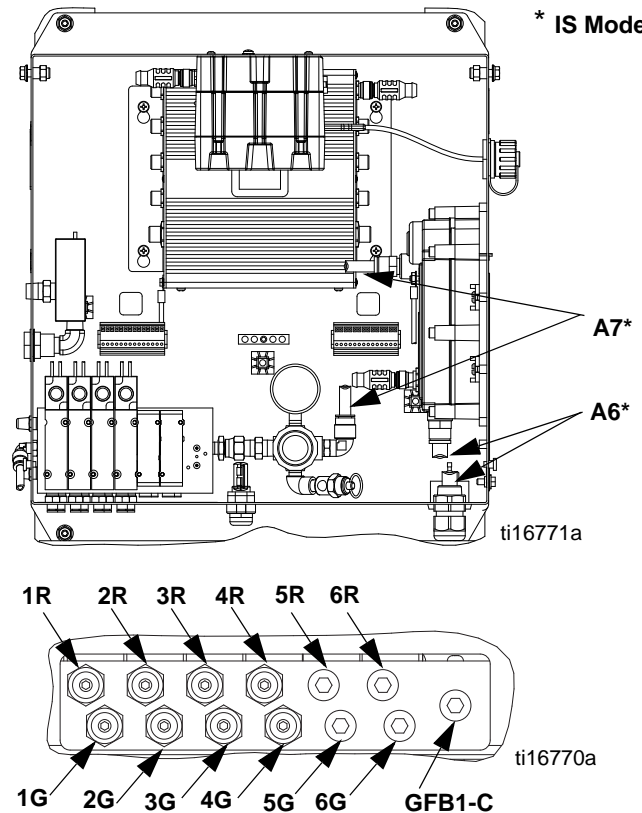
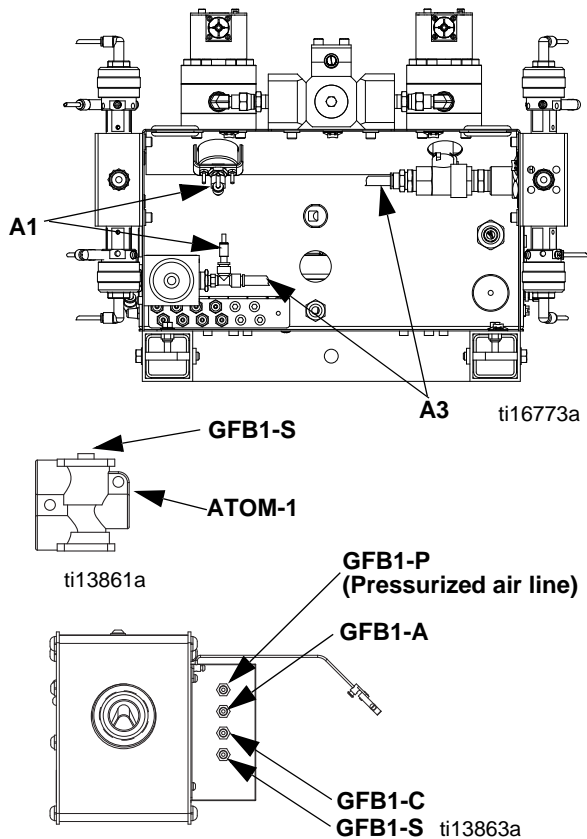
| Ref. | Part | Description | Qty. |
|------|--------|--|------|
| 101 | ----- | PLATE, fluid | 1 |
| 102 | 114342 | ELBOW, 1/4-18 npsm | 2 |
| 103 | 289813 | METER, gear, G3000 | 1 |
| 103a | 26A119 | METER, gear, G3000A | 1 |
| 104 | 16F063 | SPACER, meter | 2 |
| 105 | 104655 | GAUGE, air pressure | 1 |
| 105a | ----- | SCREW, mounting, gauge | 6 |
| 106 | 118762 | VALVE, ball, vented, 1/2 in. | 1 |
| 106a | ----- | HANDLE, ball valve | 1 |
| 106b | ----- | SCREW | 1 |
| 106c | ----- | WASHER | 1 |
| 108 | ----- | VALVE, stack, color; 1 color/1 solvent or 3 color/1 solvent, see page 59 | 1 |
| 109 | 100527 | WASHER, plain | 4 |
| 110 | 117029 | SCREW, M6x25 | 4 |
| 111 | 501867 | VALVE, check | 1 |
| 111a | 24T894 | VALVE, check, 316 sst | 1 |
| 112 | 107404 | SCREW, cap, sockethead | 2 |
| 113 | 100081 | BUSHING, pipe | 1 |
| 114 | C19675 | BUSHING, reducer | 2 |
| 115 | 15T498 | SWIVEL, 90°, 5/32T x 1/8 npt(f) | 1 |
| 116 | C20365 | FITTING, tee | 1 |
| 117 | 517312 | CONNECTOR, male | 1 |
| 118 | 17C910 | HARNESS, cable, w/connector, G3000 and G3000A | 2 |
| 120 | 114153 | ELBOW, male, swivel | 1 |
| 121 | 158491 | FITTING, nipple | 1 |
| 122 | 512905 | FITTING, bulkhead | 1 |
| 123 | 114366 | FITTING, tube | 1 |
| 124 | 117793 | HOLDER, tie | 6 |
| 209 | 114124 | FILTER, air, 3/8 npt, see page 63 for filter elements. | 1 |
| 230 | 262028 | TOOL KIT, installation | 1 |
| 325▲ | 15W598 | LABEL, warning | 1 |

▲Replacement Danger and Warning labels, tags, and cards are available at no cost.

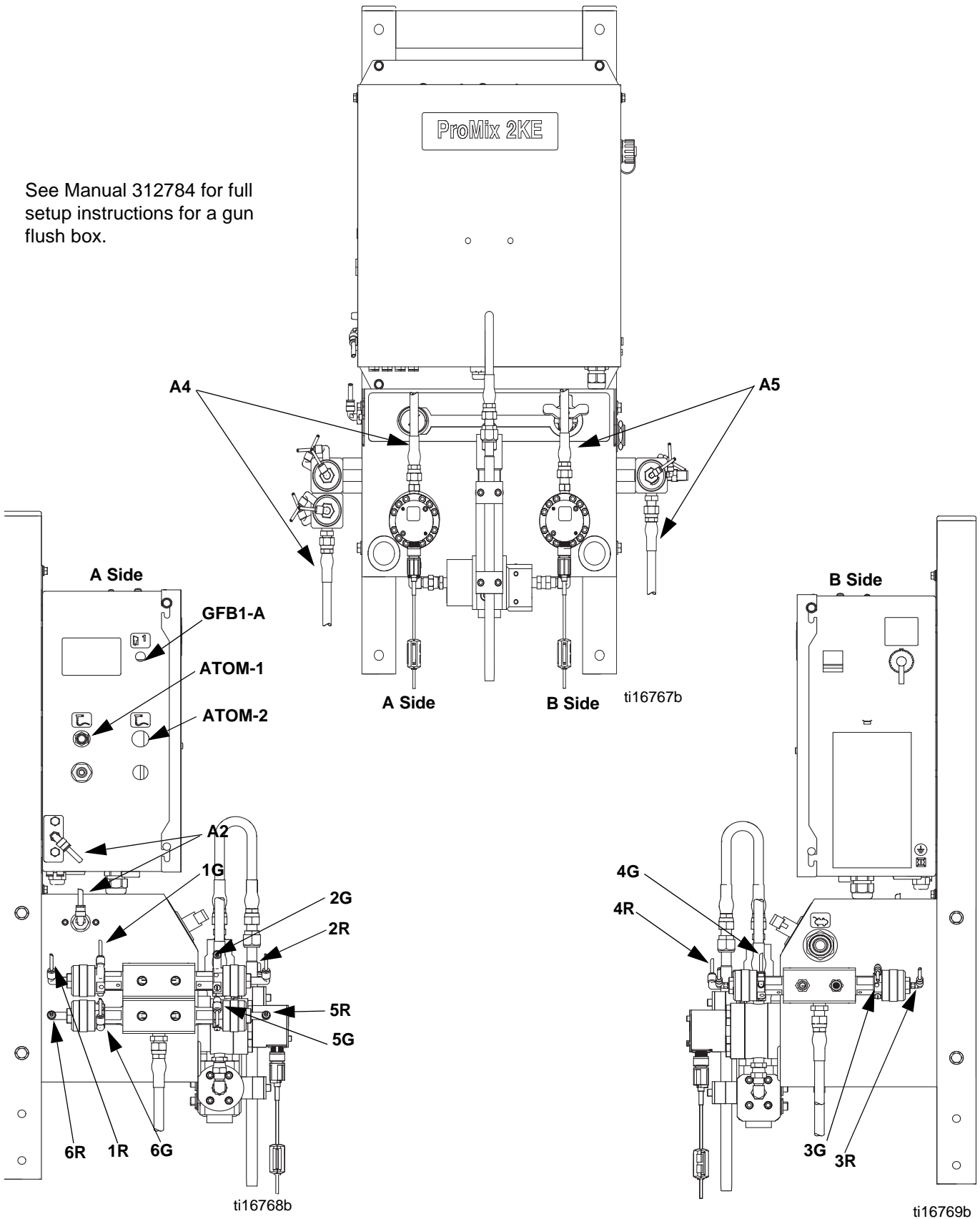
Tubing Chart, Meter-Based Models 24F080-24F087 and 24Z013-24Z016

| Type | Color | Description | Starting Point | Ending Point | Tube OD in. (mm) |
|-------|---------|------------------------------|----------------|------------------------------|------------------|
| Air | Green | Solvent Valve A On | 1G | 1G | 0.156 (4.0) |
| Air | Green | Dose Valve A1 On | 2G | 2G | 0.156 (4.0) |
| Air | Green | Solvent Valve B On | 3G | 3G </td <td>0.156 (4.0)</td> | 0.156 (4.0) |
| Air | Green | Dose Valve B On | 4G | 4G | 0.156 (4.0) |
| Air | Green | Dose Valve A2 On | 5G | 5G | 0.156 (4.0) |
| Air | Green | Dose Valve A3 On | 6G | 6G | 0.156 (4.0) |
| Air | Red | Solvent Valve A Off | 1R | 1R | 0.156 (4.0) |
| Air | Red | Dose Valve A1 Off | 2R | 2R | 0.156 (4.0) |
| Air | Red | Solvent Valve B Off | 3R | 3R | 0.156 (4.0) |
| Air | Red | Dose Valve B Off | 4R | 4R | 0.156 (4.0) |
| Air | Red | Dose Valve A2 Off | 5R | 5R | 0.156 (4.0) |
| Air | Red | Dose Valve A3 Off | 6R | 6R | 0.156 (4.0) |
| Air | ---- | Main Air to Pressure Gauge | A1 | A1 | 0.156 (4.0) |
| Air | Natural | Solenoid Air | A2 | A2 | 0.25 (6.3) |
| Air | Natural | Main Air to Filter | A3 | A3 | 0.25 (6.3) |
| Fluid | ---- | Valve Stack A to Meter A | A4 | A4 | 0.375 (9.5) |
| Fluid | ---- | Valve Stack B to Meter B | A5 | A5 | 0.375 (9.5) |
| Air | Black | Alternator Air Exhaust* | A6 | A6 | 0.5 (12.7) |
| Air | Natural | Air Regulator to Alternator* | A7 | A7 | 0.375 (9.5) |

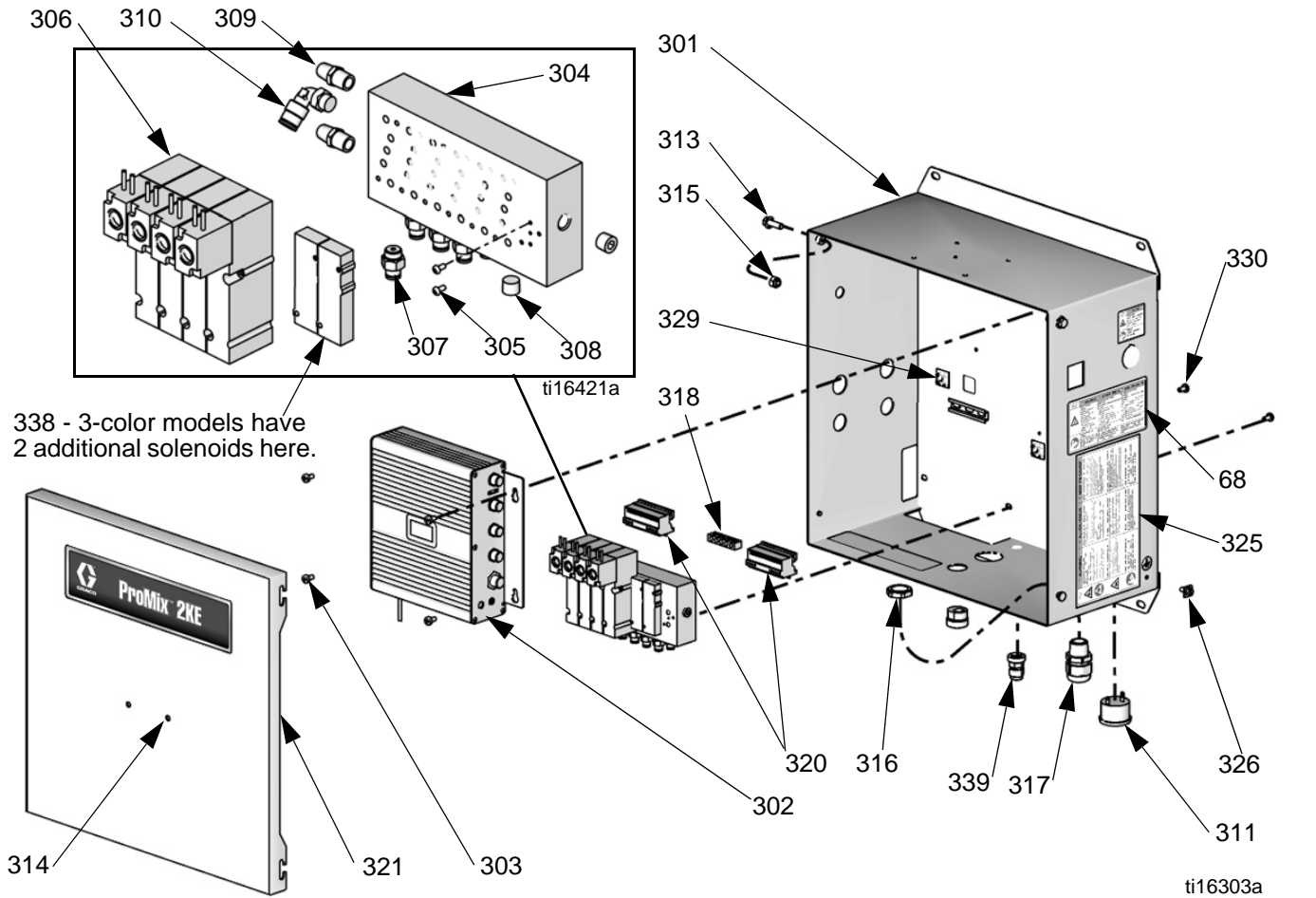
* Used only on IS models.



See Manual 312784 for full setup instructions for a gun flush box.



Control Box

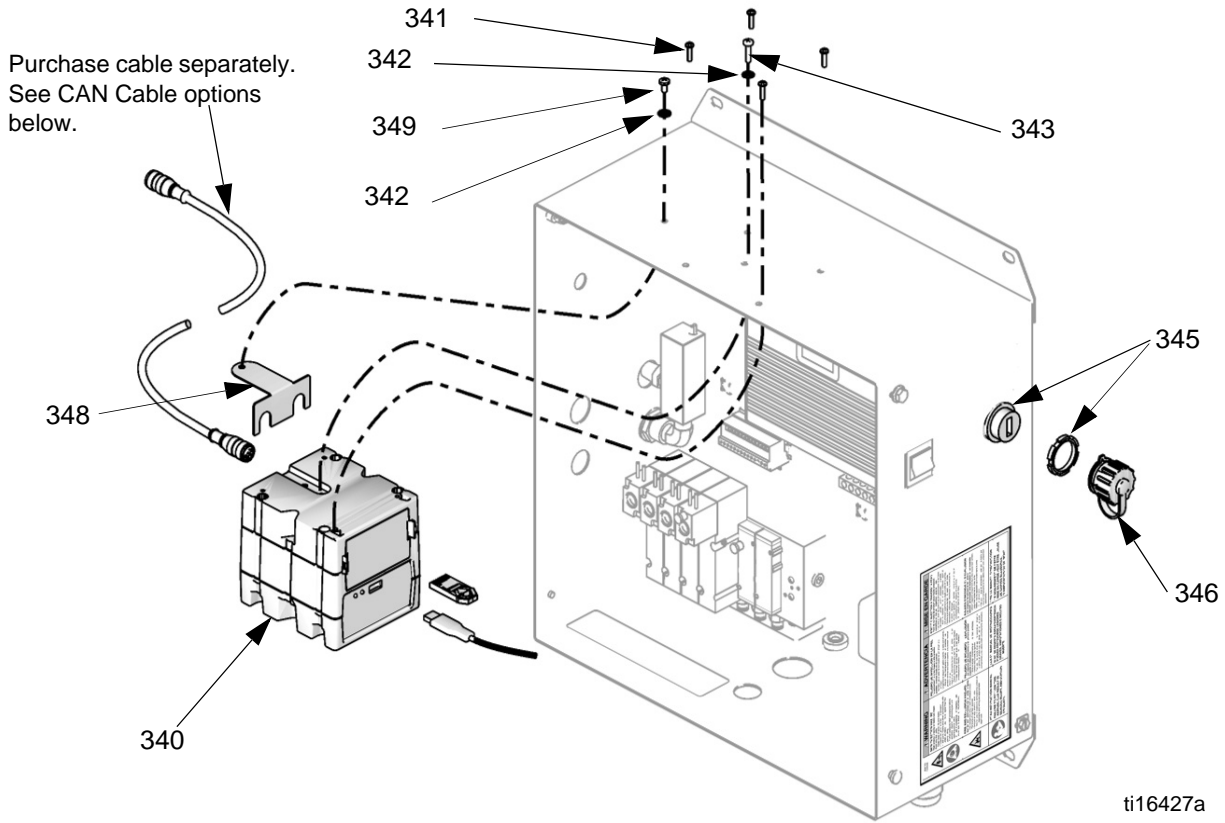


ti16303a

| Ref. | Part | Description | Qty. | Ref. | Part | Description | Qty. |
|------|--------|---|------|------|--------|--|------|
| 68▲ | 15W776 | LABEL, warning | 1 | 314 | ---- | PLUG, hole | 2 |
| 301 | ---- | ENCLOSURE, control box | 1 | 315 | 102040 | NUT, lock, hex | 2 |
| 302 | 16F357 | MODULE, advanced fluid control | 1 | 316 | 117625 | NUT, locking | 1 |
| 302a | 103854 | SCREWS, access cover, not shown | 2 | 317 | 117745 | BUSHING, strain relief | 1 |
| 302b | ---- | COVER, access, not shown | 1 | 318 | 119257 | CONNECTOR, bar, ground | 1 |
| 303 | 110637 | SCREW, machine, panhead | 4 | 319 | 16G607 | BUSHING, strain relief | 1 |
| 304 | 16E943 | MANIFOLD, solenoid | 1 | 320 | 16E890 | HARNESS, solenoid/meter | 2 |
| 305 | 121628 | SCREW, self-sealing | 2 | 321 | 24F208 | COVER, control box | 1 |
| 306 | 117356 | VALVE, solenoid | | 325▲ | 15W598 | LABEL, warning | 1 |
| | | Pump and 1-Color Meter Systems | 4 | 326 | 116343 | SCREW, ground | 1 |
| | | 3-Color Meter Systems | 6 | 327 | 223547 | WIRE, not shown | A/R |
| 307 | 114263 | CONNECTOR, male | | 328 | 112512 | FERRULE, wire, orange, not shown | 10 |
| | | Pump and 1-Color Meter Systems | 8 | 329 | 117793 | HOLDER, tie | 3 |
| | | 3-Color Meter Systems | 12 | 330 | 103833 | SCREW, machine | 2 |
| 308 | 100139 | PLUG, pipe | 4 | 338 | 552183 | PLATE, solenoid mounting; 3-color models have solenoids on this plate. | 2 |
| 309 | C06061 | MUFFLER, | 2 | 339 | 195889 | CONNECTOR, cord strain relief | 1 |
| 310 | 112698 | ELBOW | 1 | 340 | 15D906 | SUPPRESSOR | 1 |
| 311 | 122000 | ALARM, | 1 | | | | |
| 312 | 15V778 | CABLE, IS, CAN female-female, not shown | 1 | | | | |
| 313 | 113796 | SCREW | 2 | | | | |

▲Replacement Danger and Warning labels, tags, and cards are available at no cost.

USB Module



| Ref. | Part | Description | Qty. |
|------|--------|-----------------------|------|
| 340 | 16F358 | USB MODULE with TOKEN | 1 |
| 341 | 121417 | SCREW | 4 |
| 342 | 102063 | WASHER | 2 |
| 343 | 195875 | SCREW, grounding | 1 |
| 345 | 24H084 | USB HARNESS | 1 |
| 346 | 15R325 | COVER, bulkhead | 1 |
| 347 | 15X214 | LABEL, warning | 1 |
| 348 | 16G873 | BRACKET, grounding | 1 |
| 349 | 195874 | SCREW, grounding | 1 |

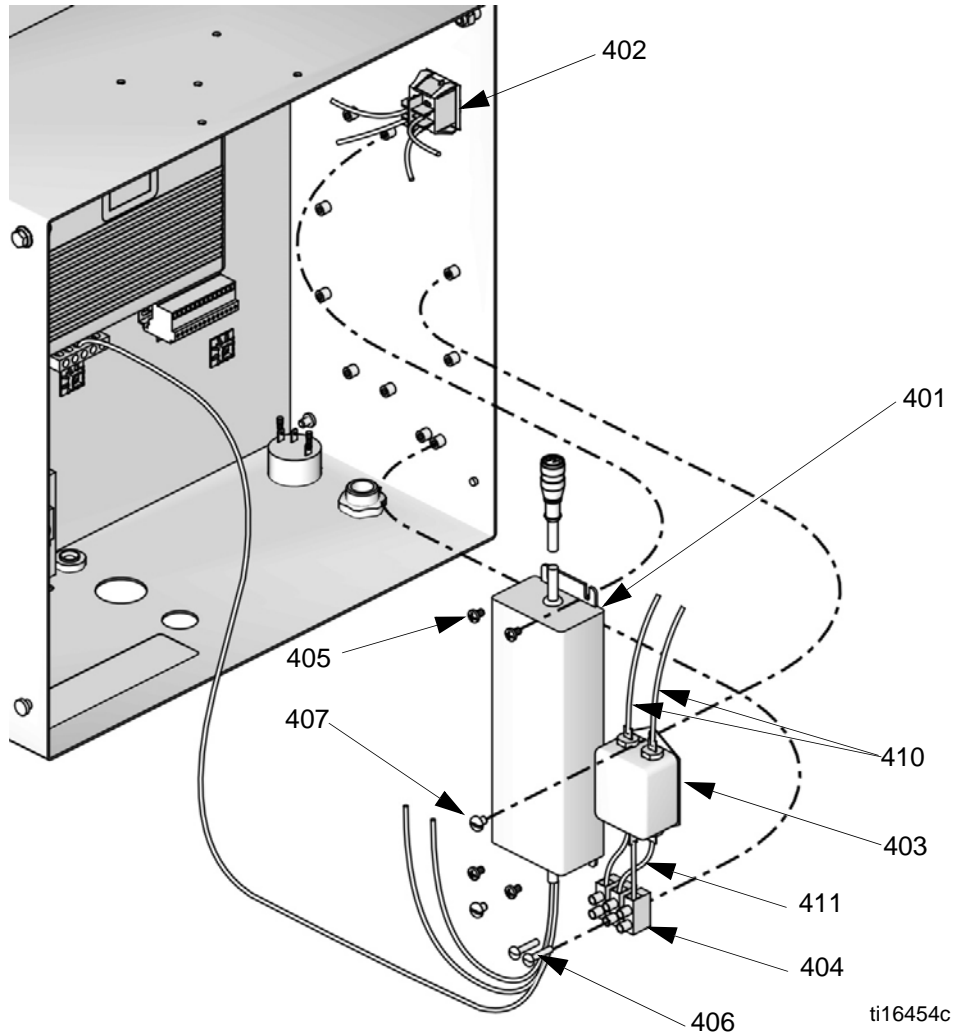
| Software Updates | | Qty. |
|------------------|---|------|
| Part | Description | |
| 16D922 | TOKEN, latest version of software for Advanced Fluid Control Module, Display Module, and USB Module | 1 |

NOTE: Order Kit 24H253 to add a USB Module. Includes all parts shown and instructions.

CAN Cables

| Part | Description | Qty. |
|--------|--------------------------|------|
| 15V778 | CABLE, for Non-IS models | 1 |
| 15V782 | CABLE, for IS models | 1 |

Electric Power Assembly



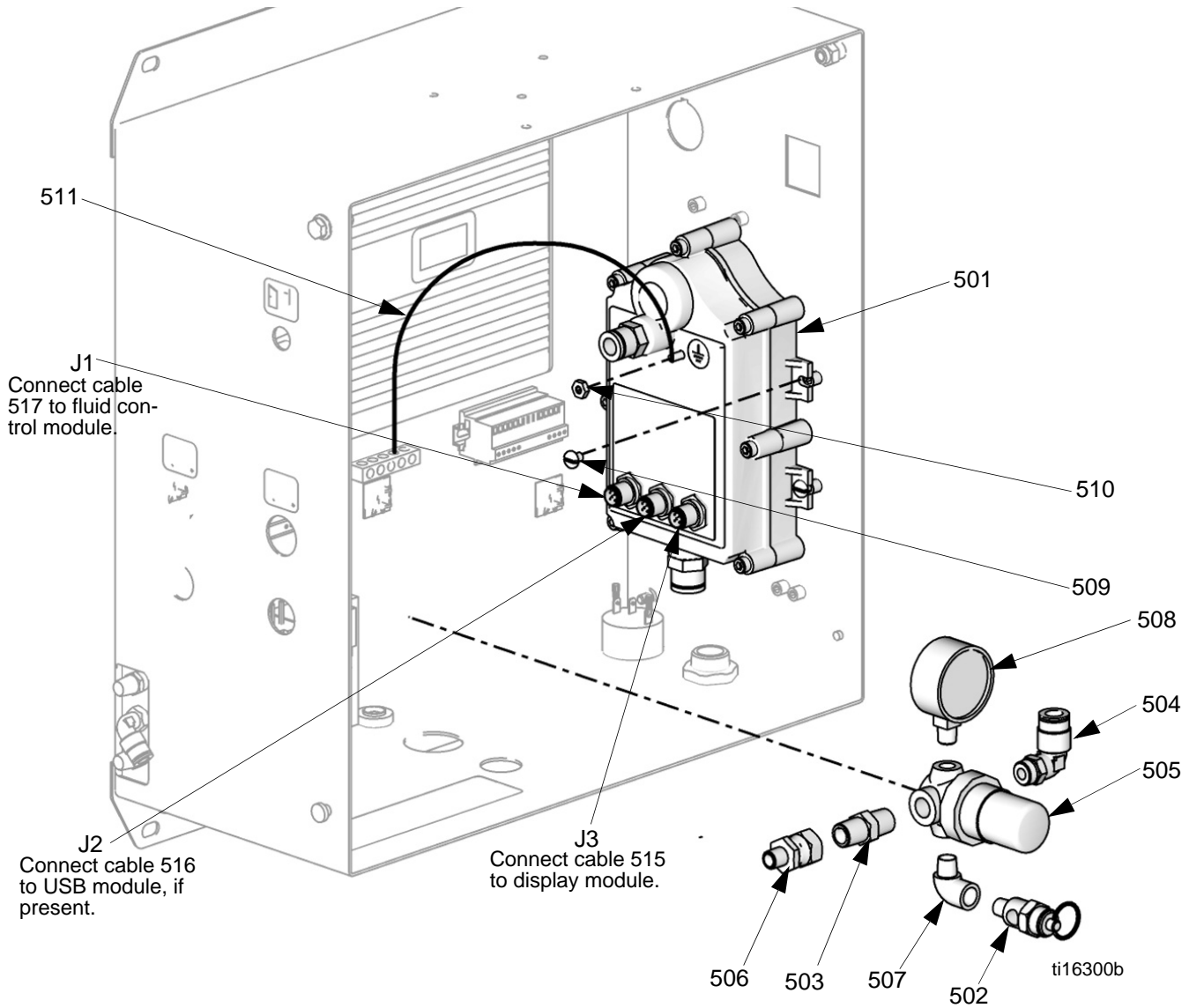
ti16454c

| Ref. | Part | Description | Qty. |
|------|--------|--|------|
| 401 | 15V747 | POWER SUPPLY, 24 VDC, 2.5 A, 60 watt, B-code, with cable | 1 |
| 402 | 116320 | SWITCH, rocker, power | 1 |
| 403 | 115306 | FILTER, power line | 1 |
| 404 | 114095 | BLOCK, terminal | 1 |
| 405 | 112144 | SCREW, machine, pan head | 4 |
| 406 | 109467 | SCREW, machine, pan head | 2 |
| 407 | 103832 | SCREW, mach | 2 |
| 408 | 100139 | PLUG, pipe, not shown | 1 |
| 410 | ---- | HARNESS, 2-wire; 8 in. (203 mm) | 1 |
| 411 | ---- | HARNESS, 3-wire; 4 in. (102 mm) | 1 |

NOTE: Order Electric Power Conversion Kit 16G351 to convert an intrinsically safe air-powered alternator power supply to a non-intrinsically safe electric power supply.

---- Not sold separately.

Alternator Power Assembly



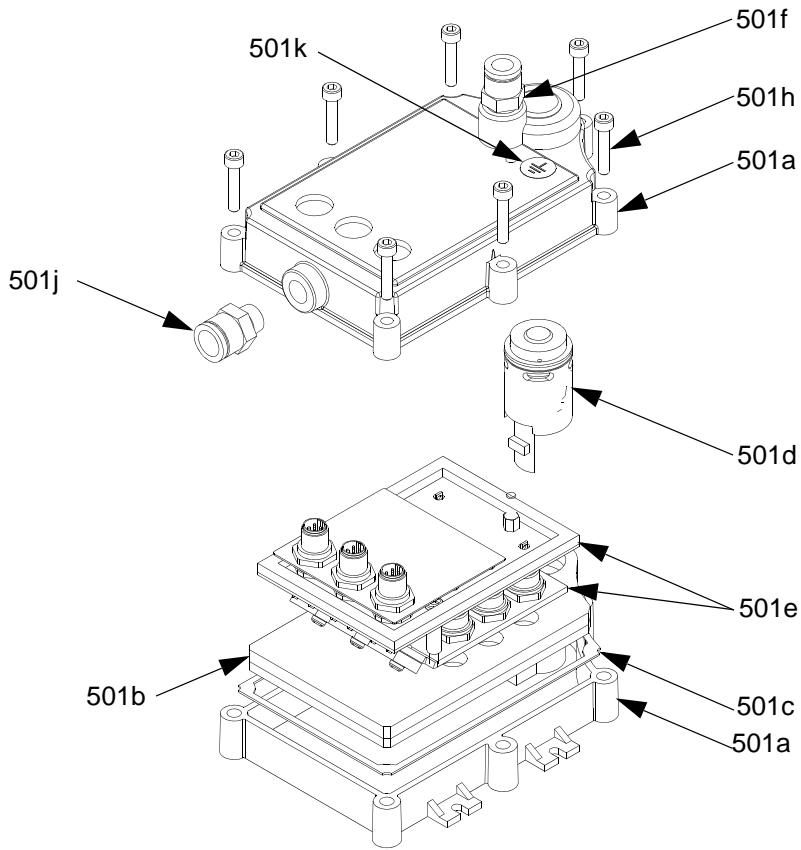
| Ref. Part | Description | Qty. |
|-----------|--|------|
| 501 | 255728 ALTERNATOR, module, see page 57 for parts | 1 |
| 502 | 15W017 VALVE, safety | 1 |
| 503 | 156971 FITTING, nipple, short | 1 |
| 504 | 115841 ELBOW | 1 |
| 505 | 115243 REGULATOR, air, 1/4 npt | 1 |
| 506 | 113915 UNION, swivel | 1 |
| 507 | 112307 ELBOW | 1 |
| 508 | 104655 GAUGE, pressure | 1 |
| 509 | 103833 SCREW, machine | 4 |
| 510 | 100284 NUT, hex | 1 |
| 511 | 15B090 WIRE, grounding | 1 |
| 512 | 112514 FERRULE, not shown | 1 |
| 513 | ----- TUBE, exhaust, black; 1/2 in. (13 mm) OD | 3 |
| 514 | ----- TUBE, air; 3/8 in. (10 mm) OD | 1 |

CAN Cables

| Ref. Part | Description | Qty. |
|-----------|-----------------------------------|------|
| 515 | 123278 CABLE, CAN; 10 ft (3.05 m) | 1 |
| 516 | 15V782 CABLE, CAN; 2 ft (0.6 m) | 1 |
| 517 | 15V778 CABLE, CAN; 20 in. (0.5 m) | 1 |

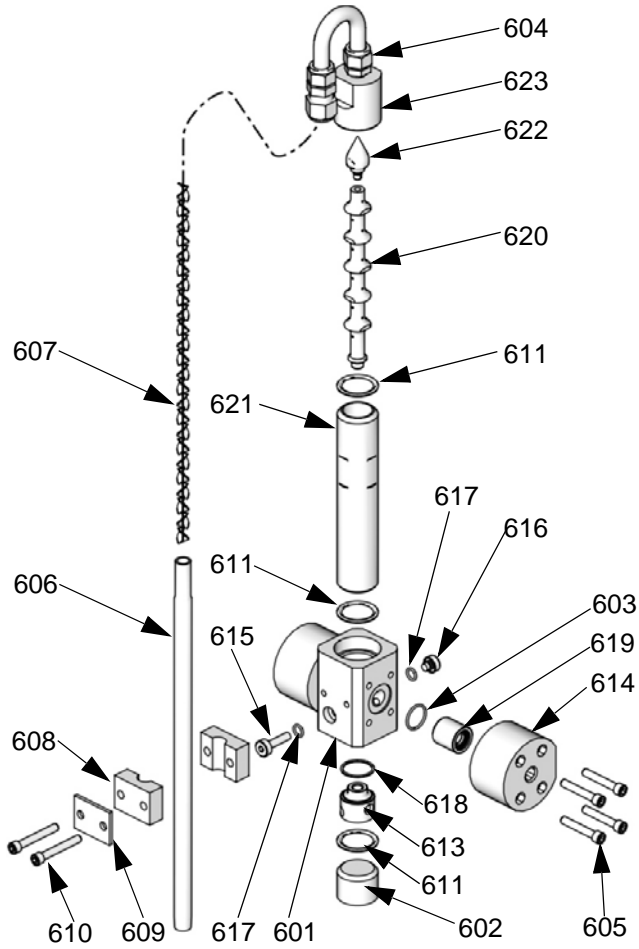
NOTE: Order Alternator Conversion Kit 16G353 to convert from an electric power supply to an air-powered alternator power supply.

Alternator Module 255728



| Ref. | Part | Description | Qty. |
|-------|--------|---------------------------|------|
| 501a | ---- | HOUSING, upper and lower | 1 |
| 501b | ---- | GASKET, stacked, internal | 1 |
| 501c | ---- | GASKET, housing | 1 |
| 501d | 257147 | TURBINE | 1 |
| 501e | ---- | BOARD, assy. | 1 |
| 501f | 122161 | FITTING, air | 1 |
| 501g▲ | 15R337 | LABEL, warning, not shown | 1 |
| 501h | 114380 | SCREW, cap, socket head | 7 |
| 591j | 122848 | FITTING, air | 1 |
| 501k▲ | 172953 | LABEL, grounding | 1 |

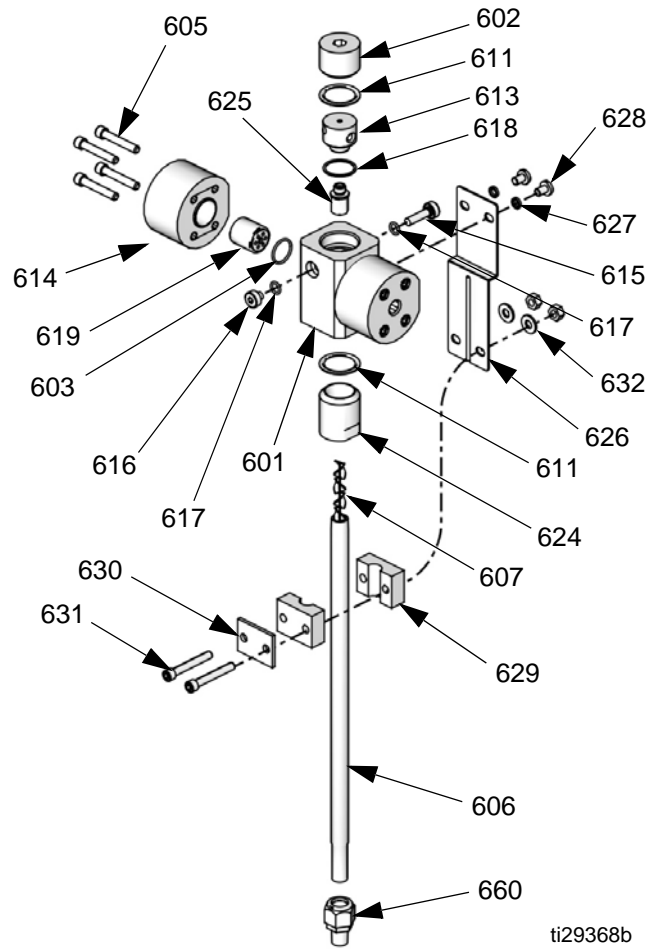
Sequential Dosing Mix Manifold 262398



ti16301b

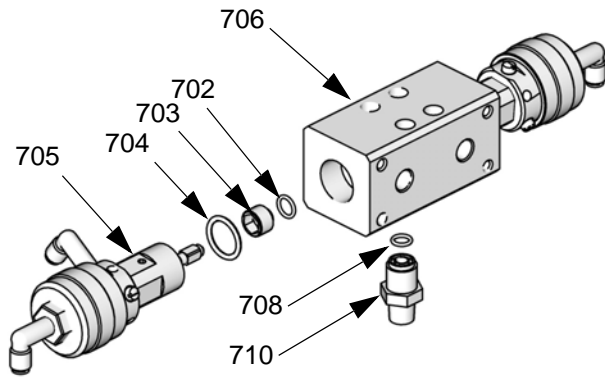
| Ref. | Part | Description | Qty. |
|------|--------|---|------|
| 601 | ---- | BODY, integrator manifold | 1 |
| 602 | 15T592 | PLUG, integrator manifold | 1 |
| 603 | ---- | O-RING | 2 |
| 604 | 118823 | TUBE, outlet | 1 |
| 605 | 15B588 | SCREW, cap, socket hd | 8 |
| 606 | 15D430 | TUBE, static mixer | 1 |
| 607 | 118822 | ELEMENT, static mixer | 2 |
| 608 | 118830 | CLAMP, body, integrator tube | 1 |
| 609 | 118831 | COVER, clamp, integrator tube | 1 |
| 610 | 101885 | SCREW, cap, socket hd | 2 |
| 611 | ---- | O-RING | 3 |
| 613 | 15T943 | BASE, integrator | 1 |
| 614 | ---- | MANIFOLD, end | 2 |
| 615 | 15T748 | SEAL, screw | 1 |
| 616 | 15T749 | SEAL, screw | 1 |
| 617 | ---- | O-RING | 2 |
| 618 | ---- | O-RING | 1 |
| 619 | 16D658 | VALVE, check | 2 |
| 620 | 15V021 | MIXER, integrator, 50cc, includes parts 621-623 | 1 |
| 621 | ---- | HOUSING, integrator, 50cc | 1 |
| 622 | ---- | CAP, mix, integrator | 1 |
| 623 | ---- | CAP, integrator | 1 |

Dynamic Dosing Mix Manifold 262399



ti29368b

| Ref. | Part | Description | Qty. |
|------|--------|--|------|
| 601 | ---- | BODY, integrator manifold | 1 |
| 602 | 15T592 | PLUG, integrator manifold | 1 |
| 603 | ---- | O-RING | 2 |
| 605 | 15B588 | SCREW, cap, socket hd | 8 |
| 606 | 15D430 | TUBE, static mixer | 1 |
| 607 | 118822 | ELEMENT, static mixer | 2 |
| 611 | ---- | O-RING | 3 |
| 613 | 15T943 | BASE, integrator | 1 |
| 614 | ---- | MANIFOLD, end | 2 |
| 615 | 15T748 | SEAL, screw | 1 |
| 616 | 15T749 | SEAL, screw | 1 |
| 617 | ---- | O-RING | 2 |
| 618 | ---- | O-RING | 1 |
| 619 | 16D658 | VALVE, check | 2 |
| 624 | 15U955 | CAP, injection, 0cc, includes part 625 | 1 |
| 625 | ---- | RESTRICTOR, injection, 0.070 | 1 |
| 626 | 16G872 | BRACKET, mounting | 1 |
| 627 | 105510 | WASHER, lock | 2 |
| 628 | 100609 | SCREW, machine, panhead | 2 |
| 629 | 118830 | CLAMP, body, integrator tube | 2 |
| 630 | 118831 | COVER, clamp, integrator tube | 1 |
| 631 | 101885 | SCREW, cap, socket hd | 2 |
| 632 | 112223 | NUT, hex | 2 |
| 660 | 16G636 | FITTING, outlet | 1 |



ti16791a

1-Color/1-Solvent Valve Stack 262401

| Ref. | Part | Description | Qty. |
|-------|--------|-----------------------------------|------|
| 702*† | ----- | O-RING | 2 |
| 703*† | ----- | SEAT, valve | 2 |
| 704*† | ----- | O-RING, PTFE | 2 |
| 705 | 15X303 | VALVE, dispense | 2 |
| 706◆ | 16F057 | MANIFOLD, valve, 1-color, 303 sst | 1 |
| 708* | 110004 | O-RING | 2 |
| 710 | 16F064 | FITTING, CC | 1 |

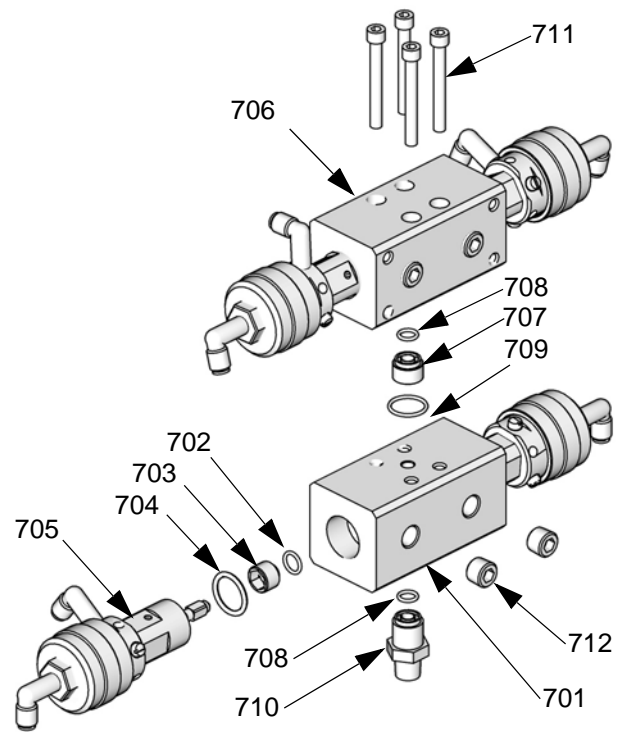
--- Parts not sold separately.

* Parts included in Valve Stack Rebuild Kit 24H254. This kit includes wear parts for 1-color and 3-color valve stacks. Order Kit 16A560 to replace a single seat (includes 702-704). Order Kit 15U933 to repair a single dispense valve.

† The standard valve seat (703) is SST. To install a carbide seat, order Kit 24U054. The kit includes a single carbide seat and o-rings 702 and 704.

◆ The standard manifold (706) is 303 SST. To install a 316 SST manifold, order Kit 24V017.

NOTE: Order Kit 24H255 to convert an existing 1-color system to a 3-color system.



ti16302a

3-Color/1-Solvent Valve Stack 262402 and Kit 24H255

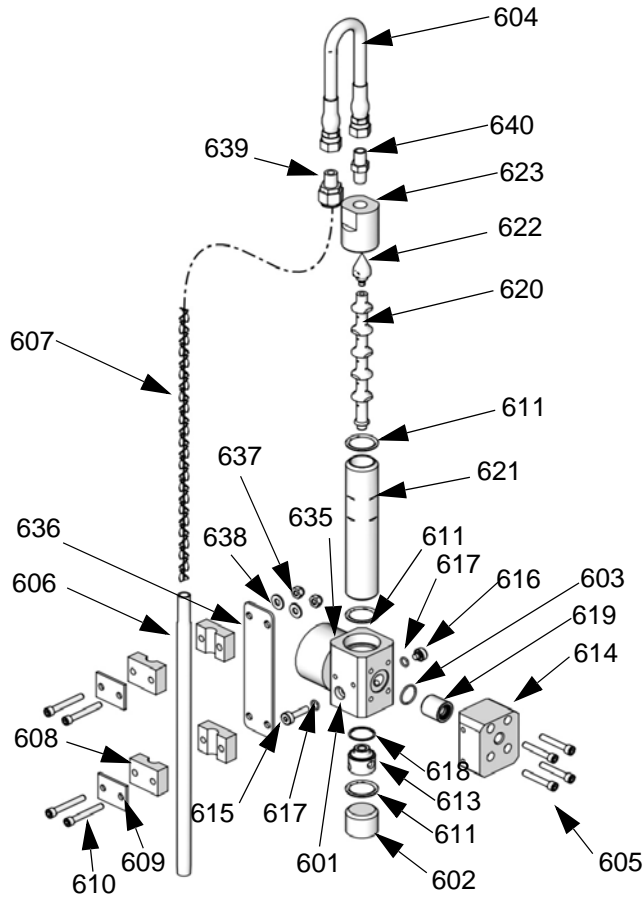
| Ref. | Part | Description | Qty. |
|-------|--------|-----------------------------------|------|
| 701 | 16F058 | MANIFOLD, valve, 3-color | 1 |
| 702*† | ----- | O-RING | 2 |
| 703*† | ----- | SEAT, dump valve | 2 |
| 704*† | ----- | O-RING, PTFE | 2 |
| 705 | 15X303 | VALVE, dispense | 2 |
| 706◆ | 16F057 | MANIFOLD, valve, 1-color, 303 sst | 1 |
| 707* | ----- | SPACER, manifold | 1 |
| 708* | 110004 | O-RING | 2 |
| 709* | 111116 | O-RING | 1 |
| 710 | 16F064 | FITTING, CC | 1 |
| 711 | 100642 | SCREW, cap, socket hd | 4 |
| 712 | 101970 | PLUG | 2 |

--- Parts not sold separately.

* Parts included in Valve Stack Rebuild Kit 24H254. This kit includes wear parts for 1-color and 3-color valve stacks. Order Kit 16A560 to replace a single seat (includes 702-704). Order Kit 15U933 to repair a single dispense valve.

† The standard valve seat (703) is SST. To install a carbide seat, order Kit 24U054. The kit includes a single carbide seat and o-rings 702 and 704.

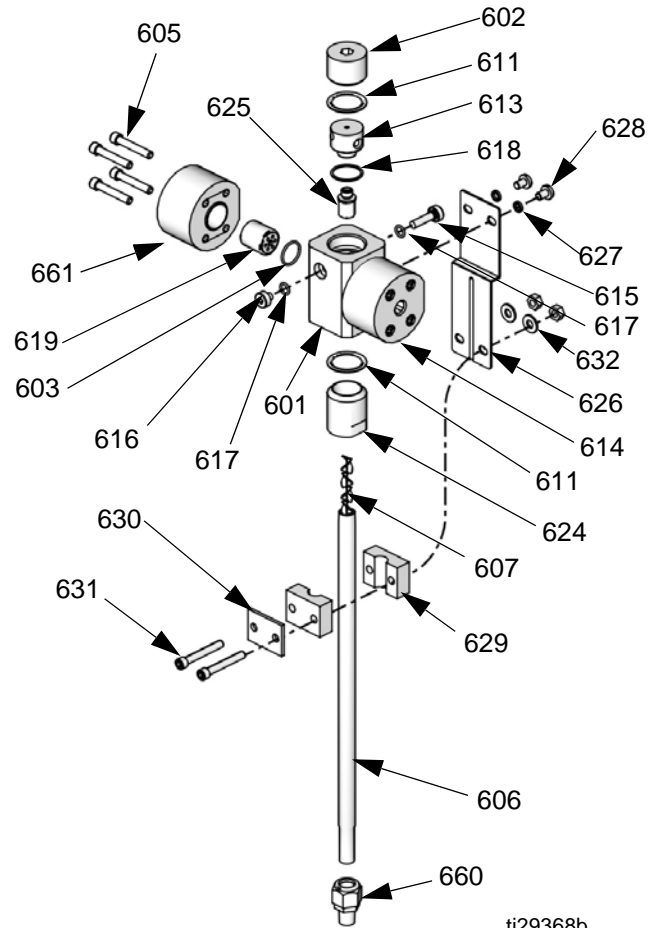
Sequential Dosing Mix Manifold 24Y546 (Acid)



ti29369b

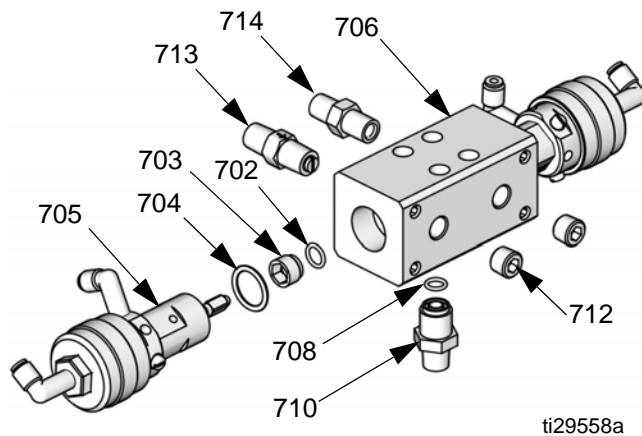
| Ref. | Part | Description | Qty. |
|------|--------|---|------|
| 601 | ---- | BODY, integrator manifold | 1 |
| 602 | 15T592 | PLUG, integrator manifold | 1 |
| 603 | ---- | O-RING | 2 |
| 604 | 25A721 | HOSE, outlet | 1 |
| 605 | 15B588 | SCREW, cap, socket hd | 8 |
| 606 | 15D430 | TUBE, static mixer | 1 |
| 607 | 118822 | ELEMENT, static mixer | 2 |
| 608 | 118830 | CLAMP, body, integrator tube | 1 |
| 609 | 118831 | COVER, clamp, integrator tube | 1 |
| 610 | 101885 | SCREW, cap, socket hd | 4 |
| 611 | ---- | O-RING | 3 |
| 613 | 15T943 | BASE, integrator | 1 |
| 614 | ---- | MANIFOLD, end (B) | 1 |
| 615 | 15T748 | SEAL, screw | 1 |
| 616 | 15T749 | SEAL, screw | 1 |
| 617 | ---- | O-RING | 2 |
| 618 | ---- | O-RING | 1 |
| 619 | 24Y516 | VALVE, check | 2 |
| 620 | 15V021 | MIXER, integrator, 50cc, includes parts 621-623 | 1 |
| 621 | ---- | HOUSING, integrator, 50cc | 1 |
| 622 | ---- | CAP, mix, integrator | 1 |
| 623 | ---- | CAP, integrator | 1 |
| 635 | ---- | MANIFOLD, end (A) | 1 |
| 636 | 17L675 | BRACE, support | 1 |
| 637 | 102040 | NUT, hex | 2 |
| 638 | 110755 | WASHER, plain | 2 |
| 639 | 16G636 | FITTING, outlet | 1 |
| 640 | 121907 | FITTING, nipple, hex, 1/4 npt | 1 |

Dynamic Dosing Mix Manifold 24Y547 (Acid)



ti29368b

| Ref. | Part | Description | Qty. |
|------|--------|--|------|
| 601 | ---- | BODY, integrator manifold | 1 |
| 602 | 17H509 | PLUG, integrator manifold | 1 |
| 603 | ---- | O-RING | 2 |
| 605 | 15B588 | SCREW, cap, socket hd | 8 |
| 606 | 15D430 | TUBE, static mixer | 1 |
| 607 | 118822 | ELEMENT, static mixer | 2 |
| 611 | ---- | O-RING | 3 |
| 613 | 15T943 | BASE, integrator | 1 |
| 614 | ---- | MANIFOLD, end (B) | 1 |
| 615 | 15T748 | SEAL, screw | 1 |
| 616 | 15T749 | SEAL, screw | 1 |
| 617 | ---- | O-RING | 2 |
| 618 | ---- | O-RING | 1 |
| 619 | 24Y516 | VALVE, check | 2 |
| 624 | 15U955 | CAP, injection, 0cc, includes part 625 | 1 |
| 625 | ---- | RESTRICTOR, injection, 0.070 | 1 |
| 626 | 16G872 | BRACKET, mounting | 1 |
| 627 | 105510 | WASHER, lock | 2 |
| 628 | 100609 | SCREW, machine, panhead | 2 |
| 629 | 118830 | CLAMP, body, integrator tube | 2 |
| 630 | 118831 | COVER, clamp, integrator tube | 1 |
| 631 | 101885 | SCREW, cap, sockethead | 2 |
| 632 | 112223 | NUT, hex | 2 |
| 660 | 16G636 | FITTING, outlet | 1 |
| 661 | ---- | MANIFOLD, end (A) | 1 |



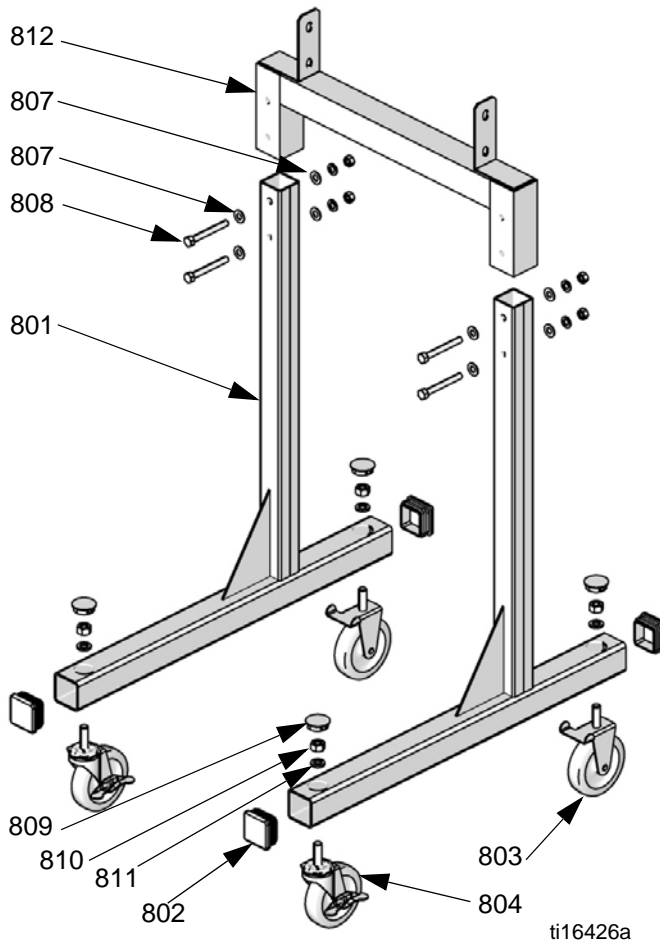
1-Catalyst/1-Solvent Valve Stack 24Y430 (Acid)

| Ref. | Part | Description | Qty. |
|------|--------|--|------|
| 702* | ---- | O-RING | 2 |
| 703* | ---- | SEAT, valve, PEEK | 2 |
| 704* | ---- | O-RING, PTFE | 2 |
| 705 | 24T784 | VALVE, dispense, acid | 2 |
| 706 | 16Y597 | MANIFOLD, valve, 1-color, 316 stainless steel | 1 |
| 708* | 110004 | O-RING | 2 |
| 710 | 16F064 | FITTING, CC | 1 |
| 712 | 128658 | PLUG, 316 sst | 2 |
| 713 | 24T894 | VALVE, check, 316 sst | 1 |
| 714 | 121907 | FITTING, nipple | 1 |

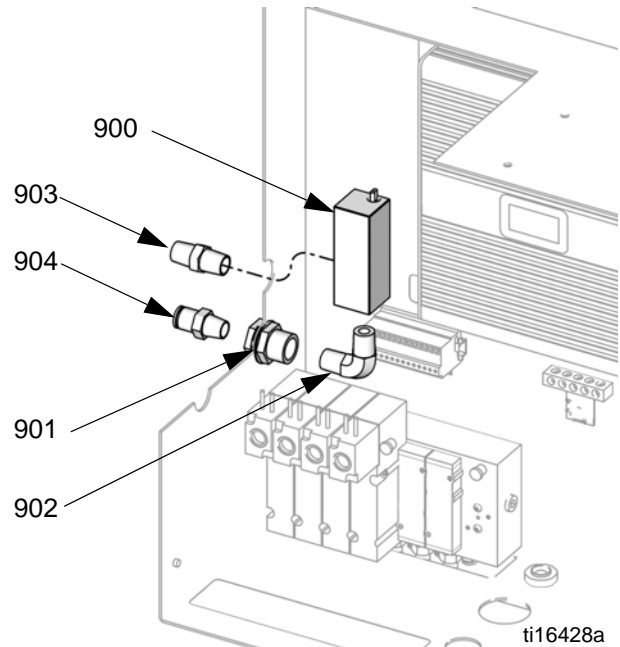
--- Parts not sold separately.

* Parts included in Valve Stack Rebuild Kit 26A187
This kit includes wear parts for 1-color and 3-color
valve stacks. Order Kit 26A035 to replace a single
seat (includes 702-704). Order Kit 24T817 to repair a
single acid dispense valve.

NOTE: Order Kit 26A101 to convert an existing 1-cata-
lyst system to a 3-catalyst system.



Air Flow Switch Kit 15T632






| Ref. | Part | Description | Qty. |
|------|--------|-----------------------|------|
| 900 | 119159 | SWITCH, air flow | 1 |
| 901 | ---- | FITTING | 1 |
| 902 | ---- | ELBOW, 1/4 npt | 1 |
| 903 | ---- | NIPPLE, 1/4 x 1/4 npt | 1 |
| 904 | ---- | CONNECTOR, tube | 1 |

Pump Stand Kit 24F301 Meter Stand Kit 24G611

| Ref. | Description | Qty. |
|------|---------------------------|------|
| 801 | TUBE, cart | 2 |
| 802 | PLUG, tube | 4 |
| 803 | CASTER, cart | 2 |
| 804 | CASTER, swivel | 2 |
| 805 | NUT | 8 |
| 806 | WASHER | 8 |
| 807 | WASHER | 16 |
| 808 | SCREW, cap, hex hd' | 8 |
| 809 | PLUG, button | 4 |
| 810 | NUT | 4 |
| 811 | WASHER | 4 |
| 812 | ADAPTER, meter stand only | 1 |

NOTE: Stand parts are not sold separately.

Accessories

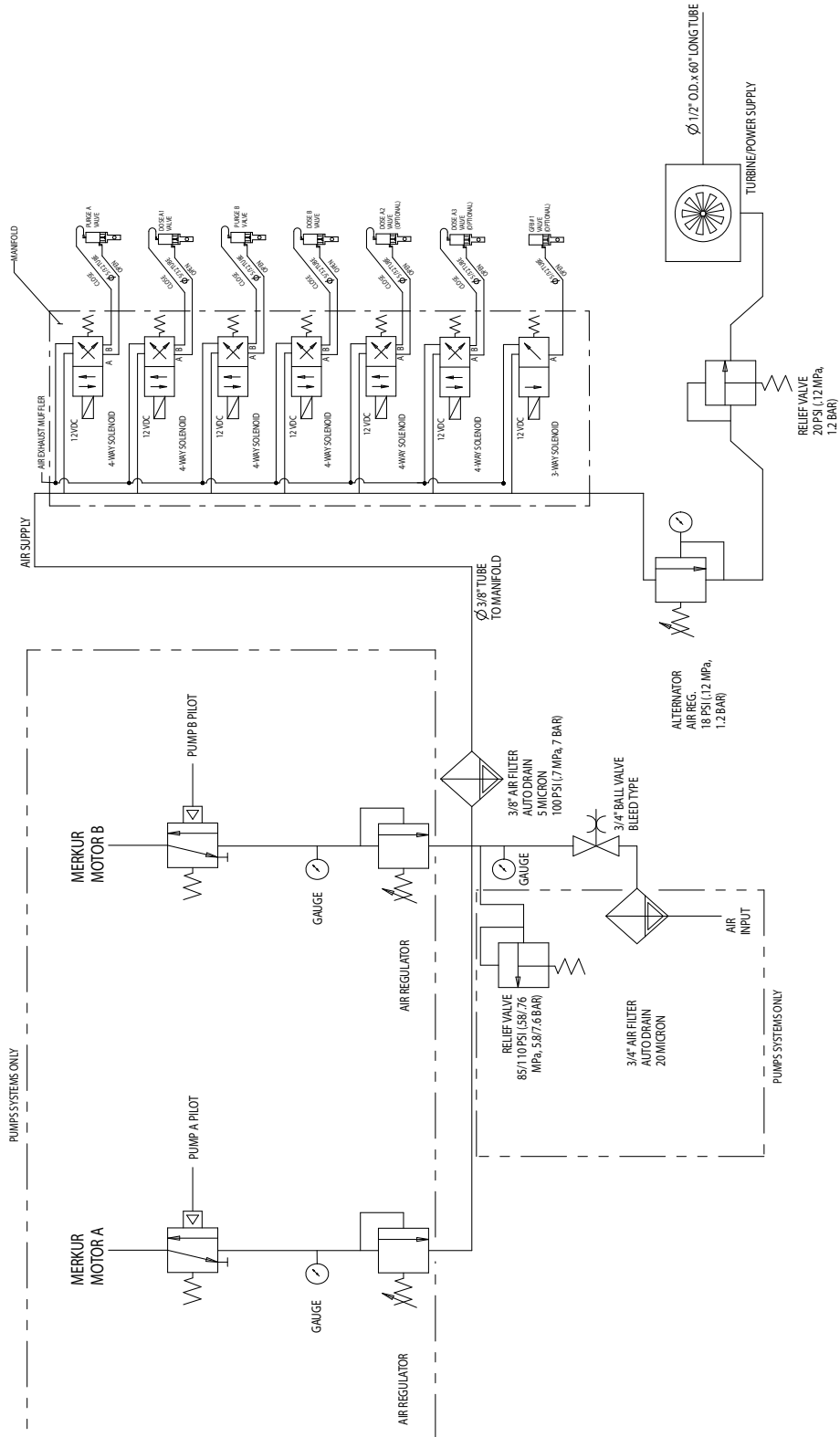
| | | | | | | |
|--|---|---|--|--|--|--|
|  |  |  | | | | |
| ProMix 2KE systems are not approved for use in hazardous locations unless the base model, all accessories, all kits, and all wiring meet local, state, and national codes. | | | | | | |

| Part | Description |
|------------------------|---|
| USB Module | |
| 16F358 | USB Module Kit, see page 54 |
| Air Flow Switch | |
| 15T632 | Air Flow Switch, see page 62 |
| Power Kits | |
| 16G351 | Electric Power Kit, see page 55 |
| 16G353 | Alternator Power Kit, see page 56 |
| Cables | |
| 123278 | 10 ft (3.05 m), Yellow, IS CAN Cable, male x female (Alternator Powered Systems) |
| 15V206 | 10 ft (3.05 m), IS CAN Cable, Blue, female x female (Electric Powered Systems) |
| 123280 | 50 ft (15.25 m), Yellow, IS CAN Cable, male x female (Alternator Powered Systems) |
| 15U533 | 50 ft (15.25 m) IS CAN Cable, Blue, female x female (Electric Powered Systems) |
| Air Filter Kits | |
| 15D909 | 5 micron air filter replacement |
| 15D890 | 40 micron air filter replacement |
| Stand Kits | |
| 24F301 | Pump Stand Kit, see page 62 |
| 24G611 | Meter Stand Kit, see page 62 |
| Dosing Kits | |
| 15V021 | 50cc Sequential Dosing |
| 24B618 | 100cc Sequential Dosing |
| 15U955 | 0cc Dynamic Dosing |
| Meter Kits | |
| 15V806 | 1/8 in. Coriolis Kit |
| 16D329 | S3000 Solvent Meter Kit |
| Gun Flush Box | |
| 15V826 | Gun Flush Box |
| 3-Color Conversion Kit | |
| 24H255 | Convert a Meter System from 1 Color/1 Solvent to 3 Colors/1 Solvent |
| Seat Kit | |
| 24U054 | Convert a standard SST Valve Seat to a Carbide Seat, see page 59 |

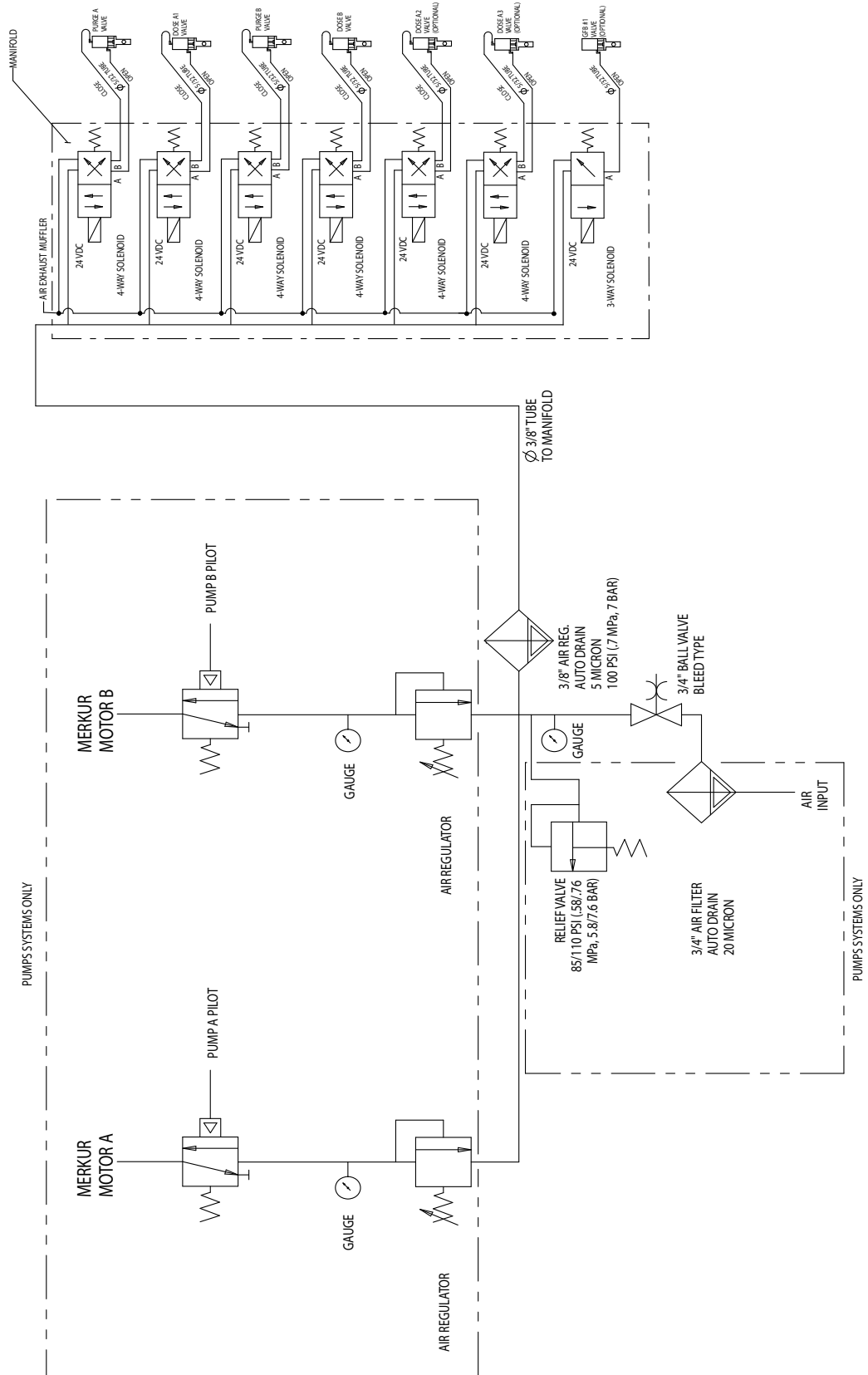
| Part | Description |
|---------------------------|--|
| Gun Holder Kits (for GFB) | |
| 198787 | ProXS2 |
| 198405 | ProXS3, ProXS4 |
| 196768 | PRO 3500, 3500hc, 4500 |
| 15T646 | AirPro Air Spray |
| 196769 | Delta Air Spray |
| 196770 | Alpha |
| 196771 | Alpha Plus, Alpha Plus RAC |
| 15G093 | G15 |
| 15G346 | G40, G40 RAC |
| Pump Accessory Kits | |
| 256410 | Hopper, 1.5 gallon (1 l) polyethylene |
| 243340 | 5 gal (18.9 l) pail cover with agitator |
| 222121 | Fluid regulator, stainless steel Maximum working pressure: 1500 psi (10.3 MPa, 103 bar) Regulator range: 150 - 1200 psi (1.0-8.2 MPa, 10-82 bar) |
| 24A587 | Pump outlet fluid filter, stainless steel, 60 mesh (250 micron), 5000 psi (35 MPa, 350 bar) |
| 256425 | Fluid filter drain valve, stainless steel, 5000 psi (35 MPa, 350 bar) |
| 224458 | Fluid filter screen element, 3-pack, 30 mesh, stainless steel |
| 224459 | Fluid filter screen element, 3-pack, 60 mesh, stainless steel |
| 24A954 | 55 gal Drum Suction Hose and Strainer, 3/4 in. fluid inlet |
| 24B598 | 55 gal Drum Suction Hose and Strainer, 1 in. fluid inlet |
| 24B337 | Stand Mount Suction Hose, PTFE lined, 3/4 in. inlet |
| 24B338 | Stand Mount Suction Hose, PTFE lined, 1 in. inlet |
| 24B424 | Wall Mount Suction Hose, PTFE lined, 3/4 in. inlet |
| 24B425 | Wall Mount Suction Hose, PTFE lined, 1 in. inlet |

Schematics

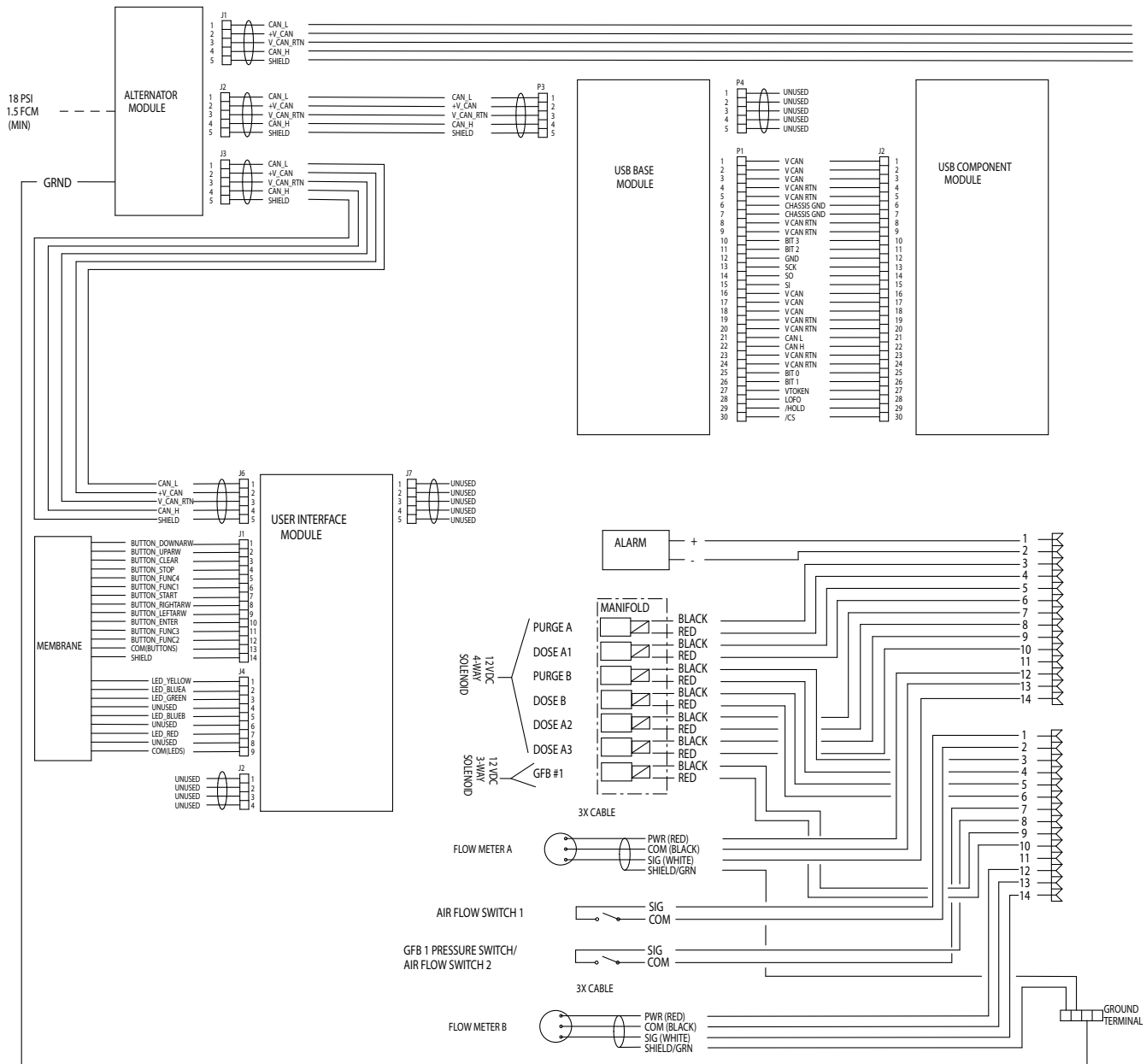
Hazardous Location System Pneumatic Schematic



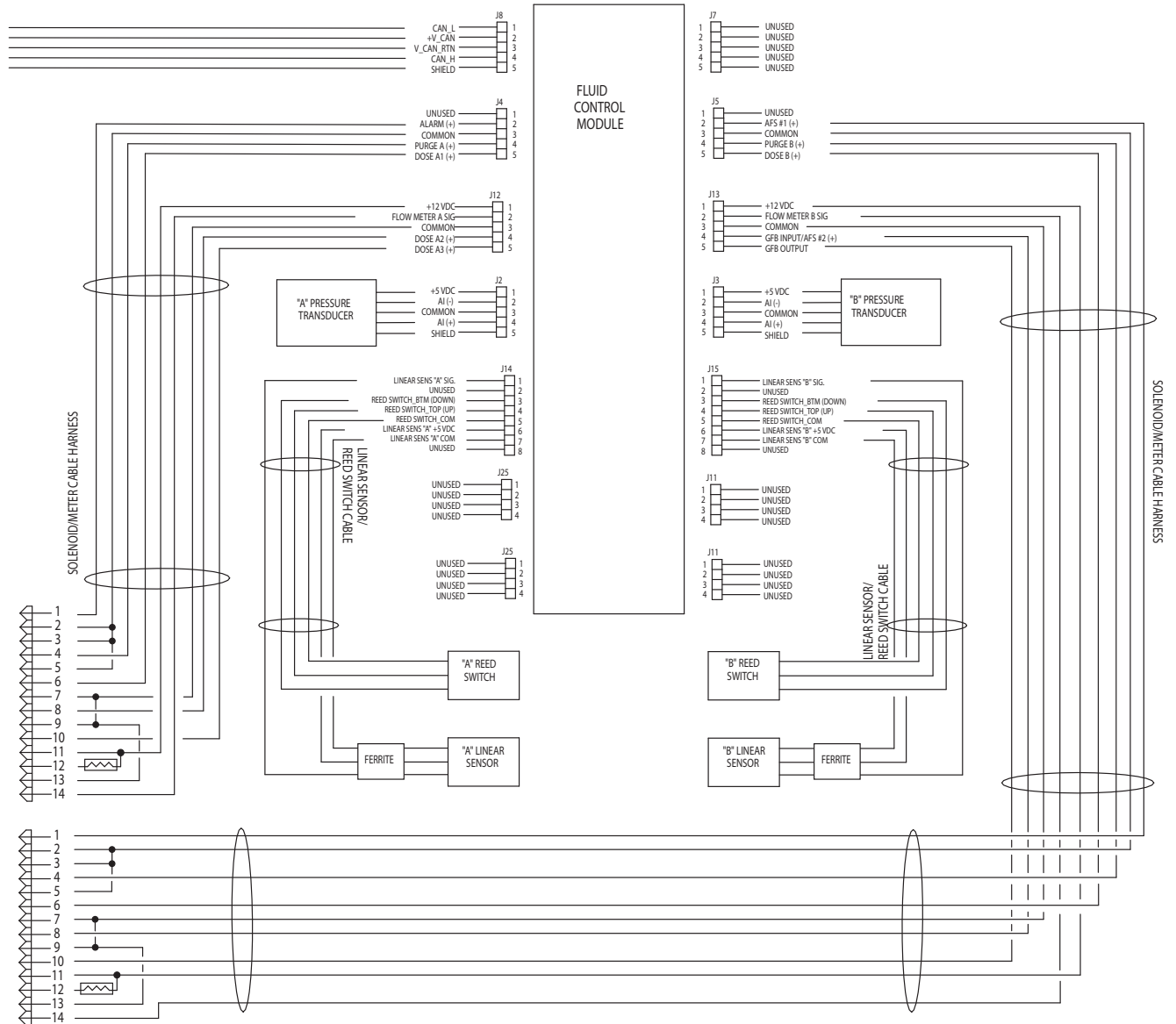
Non-Hazardous Location Pneumatic Schematic



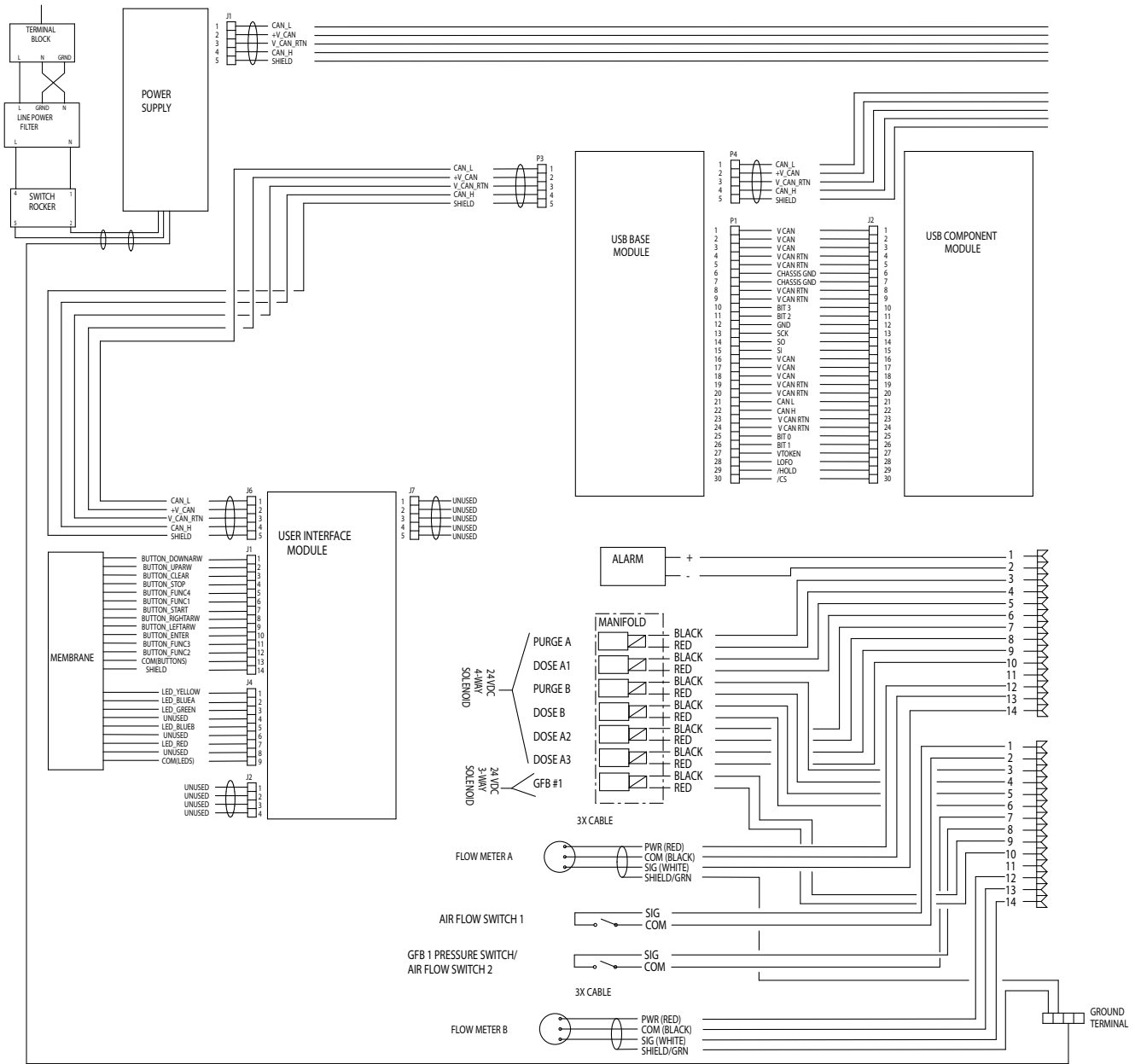
Hazardous Location Electrical Schematic



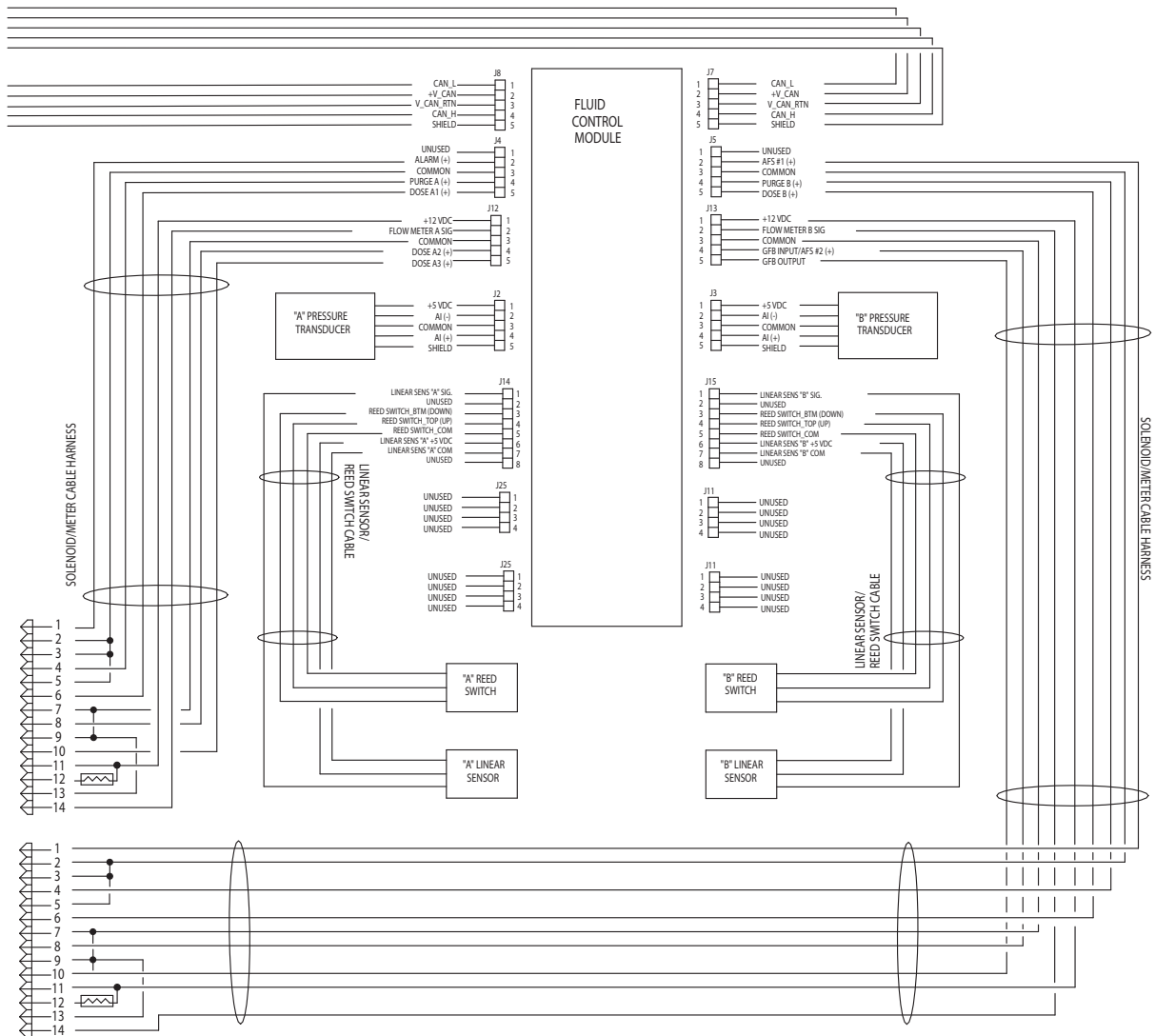
Hazardous Location Electrical Schematic (continued)



Non-Hazardous Location Electrical Schematic



Non-Hazardous Location Electrical Schematic (continued)



Technical Data

| ProMix [®] 2KE | | |
|--|---|--|
| | US | Metric |
| Maximum fluid working pressure | See Hazardous Location Models , page 5. | |
| Maximum working air pressure | 100 psi | 0.7 MPa, 7 bar |
| Air supply | 75 - 100 psi | 0.5 - 0.7 MPa, 5.2 - 7 bar |
| Air filter inlet size | 3/8 npt(f) | |
| Air filtration for air logic (Graco-supplied) | 5 micron (minimum) filtration required; clean and dry air | |
| Air filtration for atomizing air (user-supplied) | 30 micron (minimum) filtration required; clean and dry air | |
| Mixing ratio range | 0.1:1- 30:1 | |
| On-ratio accuracy | up to \pm 1%, user selectable | |
| Fluids handled | one or two component: <ul style="list-style-type: none"> • solvent and waterborne paints • polyurethanes • epoxies • acid catalyzed varnishes • moisture sensitive isocyanates | |
| Viscosity range of fluid | 20- 5000 cps | |
| Fluid filtration (user-supplied) | 100 mesh minimum | |
| Fluid flow rate range G3000, G250, G3000A Meter G3000HR, G250HR Meter Coriolis Meter S3000 Solvent Meter (accessory) | 0.02-1.00 gal./min. 0.01-0.50 gal./min. 0.005-1.00 gal./min. 0.01-0.50 gal./min. | 75 - 3800 cc/min. 38 - 1900 cc/min. 20 - 3800 cc/min. 38 - 1900 cc/min. |
| Fluid inlet sizes Flow Meter Dose Valve/Color Valve Adapters | 1/4 npt(f) 1/4 npt(f) | |
| Fluid outlet size (static mixer) | 1/4 npt(f) | |
| External Power Supply Requirements | 85 - 250 Vac, 50/60 Hz, 2 amps maximum draw 15 amp maximum circuit breaker required 8 to 14 AWG power supply wire gauge | |
| Operating temperature range | 41- 122° F | 5-50° C |
| Approximate Weight Meter Systems Pump Systems | 200 lb 300 lb | 91 kg 136 kg |
| Environmental Conditions Rating | indoor use, pollution degree (2), installation category II | |
| Noise Level Sound pressure level Sound power level | below 70 dBA below 85 dBA | |
| Wetted materials on all models | 303, 304 SST, Tungsten carbide (with nickel binder), perfluoroelastomer; PTFE | |
| Wetted materials on acid models (24Z013 - 24Z018) | 316, 17-4 SST; PEEK perfluoroelastomer; PTFE | |

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Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

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Original instructions. This manual contains English. MM 3A0870

Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

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